

Shaw Air Force Base

Phase I and II Archaeological Investigations at Shaw Air Force Base and The Poinsett Electronic Combat Range

Sumter County, South Carolina

Contract No. DACA63-990D-0010 D.O.#0046

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This report presents the results of Phase II archaeological testing of three sites 38SU58, 38SU191 and 38SU222 as well as the results of a Phase I survey of three tracts. The tested sites all contained prehistoric cultural materials dating to the Archaic, Woodland and Mississippian periods. Site 38SU58 was determined to be not eligible for nomination to the National Register of Historic Places, while sites 38SU191 and 38SU222 were determined to be eligible. The Phase I survey revisited one previously recorded site, 38SU250 and discovered one new site, 38SU299. Site 38SU250 is recommended not eligible for nomination to the National Register of Historic Places, while site 28SU299 is recommended potentially eligible for nomination.			
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ABSTRACT

Phase II Testing of three sites located within the Poinsett Electronic Combat Range (PECR) and Phase I Survey of three selected tracts at Shaw Air Force Base, South Carolina, was conducted by New South Associates for the U.S. Army Corps of Engineers, Fort Worth District, and the U.S. Air Force, Shaw Air Force Base (AFB). Most of the PECR is located in Sumter County's Manchester Township, with the southern end extending into Fulton, and the eastern edge crossing over into Privateer. The three sites under examination are from north to south, 38SU58, 38SU222, and 38SU191. All three sites were recorded as containing potentially eligible prehistoric components. The testing phase was performed in order to determine the nature and significance of these sites as well as to gather information, which would facilitate the responsible management of these resources. Methods used to evaluate the sites included close interval shovel testing and test unit excavations at locations where artifact concentrations indicated the possible presence of intact cultural components or artifact clusters.

Phase II testing at 38SU58 did not suggest a high potential for future research. Only small portions of site components remain intact, while the majority of the site is contained within the disturbed transmission-line corridor. As such, 38SU58 is recommended ineligible for nomination to the NRHP. On the other hand, Phase II testing at 38SU191 and 38SU222 revealed significant intact prehistoric components dating from the Early Archaic, Middle/Late Woodland, and Mississippian cultural periods. These sites were evaluated as eligible for nomination to the National Register according to their potential contributions to chronology building and phase definition, site structural and functional reconstruction, and settlement and subsistence reconstruction research domains previously identified for prehistoric archaeology at the PECR (Cable and Cantley 1998).

Phase I archaeological survey of three selected tracts within Shaw Air Force Base resulted in the revisit/relocation of 38SU250 and the identification of one new site (38SU299). 38SU299 is a small floodplain site situated on the northern bank of Long Branch. The presence of a possible midden feature and diagnostic lithic and ceramic material dating to the Middle Woodland and Mississippian cultural periods indicates good research potential. 38SU299 is therefore recommended potentially eligible for nomination to the NHRP.

Investigations at previously recorded site 38SU250 consisted of a surface survey over a 60 x 60 meter area of exposed ground surface. Although limited, the artifact collection identified Deptford (Middle Woodland) and Santee (Late Woodland/ Mississippian) series sherds, lithic debitage and a single Sykes/White Springs Stemmed projectile point/knife (PPK) (Middle/Late Archaic). The initial Phase I investigation recommended that 38SU250 should be considered ineligible for nomination to the NRHP (Kreisa et al. 1997). The present investigation, though limited, has revealed nothing that would suggest otherwise. We therefore concur with the initial recommendation of ineligibility.

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I. INTRODUCTION

During the period from February 28 to May 4, 2003, New South Associates conducted Phase I and Phase II archaeological investigations at Shaw Air Force Base and at Poinsett Electronic Combat Range, both located in Sumter County, South Carolina. Phase I archaeological survey and Phase II archaeological testing were conducted under subcontract with Geo-Marine, Inc., for the U.S. Army Corps of Engineers, Fort Worth District, and the U. S. Air Force, Shaw Air Force Base at the Poinsett Electronic Combat Range. The work was conducted in accordance with, and in partial fulfillment of, the U.S. Air Force's obligations under the National Historic Preservation Act of 1966, as amended through 1992 (P.L. 89-665; 80 Stat. 915; 16 U.S.C. § 470 et seg); the Archaeological and Historic Preservation Act of 1974, as amended (P.L. 93-291); the National Environmental Policy Act of 1969 (P.L. 90-190); Executive Order 11593, "Protection and Enhancement of the Cultural Environment"; the American Indian Religious Freedom Act (AIRFA) of 1978; and the Native American Graves Protection and Repatriation Act (NAGPRA) of 1990.

The Phase II portion of the investigation was conducted at three sites (38SU58, 38SU191, and 38SU222) within the Poinsett Electronic Combat Range (Figure 1). Sites 38SU191 and 38SU222 were originally identified by the South Carolina Institute of Archaeology and Anthropology (Kreisa et al. 1996). Site 38SU58 was originally identified by CRHS, Inc. (Brown et al. 1983) and later revisited by SCIAA's subsequent 1996 survey. According to the survey reports all three sites consisted of prehistoric lithic and ceramic scatters. Site 38SU58 was dated as Early and Middle Woodland on the basis of what was identified as a Yadkin Triangular projectile point and Yadkin series grit tempered ceramic sherds. Site 38SU222 was also dated to the Early and Middle Woodland based on the recovery of both Yadkin and Deptford series ceramic sherds. Finally, Site 38SU191 contained Middle Woodland, Late Woodland, and Mississippian phase lithic and ceramic components. All three sites were recommended as potentially eligible based primarily on surface density and the recovery of diagnostic material.

Phase II testing of these prehistoric lithic and ceramic scatters provides an opportunity to gain a perspective on the nature of prehistoric utilization and to address regionally pertinent research topics for the Upper Coastal Plain in South Carolina. Ultimately, the characteristics of each of the present sample of tested sites at the Poinsett Range will be used to evaluate their potential to meet the eligibility requirements for listing in the National Register of Historic Places.

Phase I investigations consisted of archaeological surveys of three selected tracts at Shaw Air Force Base and resulted in the identification of two prehistoric sites (FS-1 and FS-2) (Figure 2). Field Site 1 is situated on the north bank of Long Branch within the southern portion of the Long Branch Tract (Section 1). Field Site 2 was identified outside of the project area but within the northern section of the Long Branch tract previously surveyed by Kreisa et al. (1997). This site was previously recorded by the 1977 investigation and was designated 38SU250. The site consisted of a surface scatter situated on an upland landform overlooking Long Branch. No additional subsurface investigation of 38SU250 was undertaken as it was outside the study area.

Alvin J. Banguilan conducted the investigations summarized in this report with field assistance from Brad Botwick, Scott Morris, Holly Norton, Dale Thieling, Tiffany Thompson, and Victoria Dabir-Banguilan. The field crew conducted the initial laboratory processing of all cultural material. Victoria Dabir-Banguilan and Alvin Banguilan completed the lithic analysis, while John Cable of Palmetto Research Institute conducted the ceramic analysis. Subsistence studies were conducted under the direction of Leslie Raymer with the assistance of Veronica Daniels and Victoria Dabir-Banguilan. The Principal Investigator for the overall project was Natalie Adams.

The remainder of this report presents the context, methods, results, and recommendations of this study. Chapter II provides the environmental context for Shaw AFB and PECR. Chapter III provides the cultural context. Chapter IV presents the project's research design and methods. Chapter V synthesizes the results of the prehistoric artifact analysis. Chapter VI presents the results from floral analysis. Chapter VII presents the results and recommendations for the Phase I survey conducted at Shaw AFB. Chapter VIII discusses the work at 38SU58. Chapter IX discusses the work at 38SU222 and Chapter X discusses site 38SU191. Recommendations and conclusions are presented in Chapter XI.

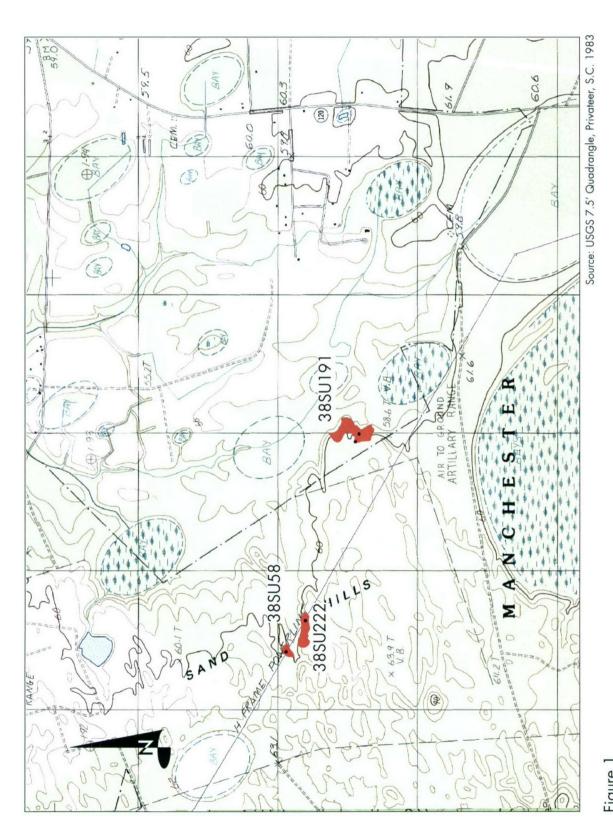
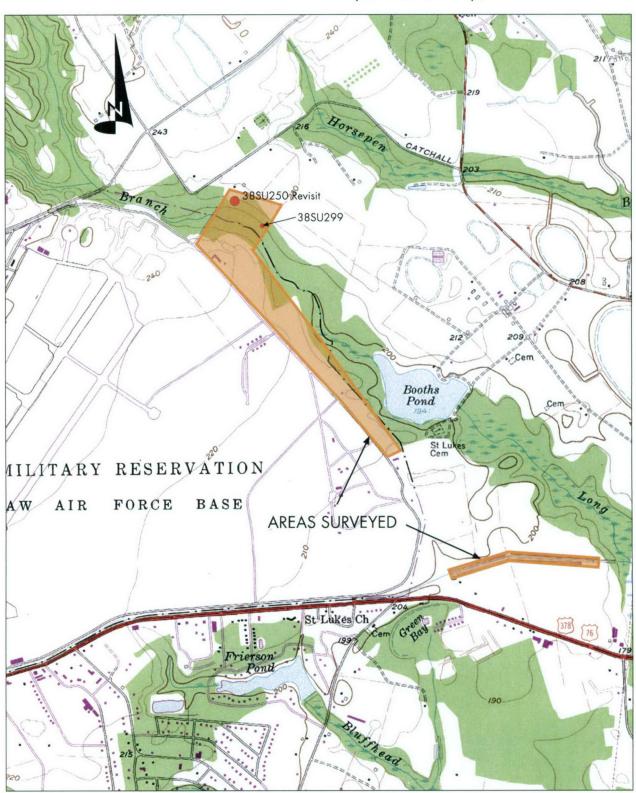


Figure 1 Project Location Map for 38SU58, 38SU191, 38SU222

Figure 2 Project Location Map, Shaw Air Force Base



Source: USGS 7.5^{\prime} Quadrangle, Sumter West, S.C. 1982

II. ENVIRONMENTAL CONTEXT

INTRODUCTION

The PECR is located in Sumter County, in the Upper Coastal Plain physiographic province of South Carolina. Sumter County is bounded by two river systems, the Lynches River to the east, and the Wateree River to the west. The junction of the Wateree and Congaree rivers at the southwest corner of Sumter County and approximately 20 km southwest of the project area forms the head of the Santee River, which empties into the Atlantic Ocean south of Georgetown, South Carolina. Flowing south through the middle of Sumter County, between the Wateree-Santee and the Lynches rivers, is a smaller drainage containing the Black River and its tributaries. The main tributary of the Black is the Pocotaligo River that flows adjacent to the city of Sumter, county seat and population center of Sumter County. The PECR lies near the divide between the Wateree to the west, and the Pocotaligo to the east. Because of its location on the divide, most of the streams in the PECR area are relatively small and seasonal.

Ethnohistoric accounts of aboriginal activities in inter-riverine upland zones of the central coastal region indicate that this physiographic province was utilized seasonally, and as a hunting and gathering preserve for the collection of nuts and game (Jones 1978; Waddell 1980). Archeological investigations in the region indicate great time depth to this land use pattern since prehistoric Native American occupants used these upland habitats on a temporary or seasonal basis. Of course, it is likely that the settlement and subsistence strategies of the people who occupied the region changed through time as overall adaptation patterns changed. It is through the definition and analysis of these subtle variations in land use that the archeology of this zone can contribute to a broader understanding of the character of prehistoric human settlement of the central South Carolina coast.

REGIONAL PHYSIOGRAPHY

Late Tertiary sea level transgressions created the distinctive physiography that is typical of the South Carolina Coastal Plain region (Mathews et al. 1980). The Coastal Plain is comprised of a series of island-beach ridge sequences that, when viewed on the landscape, appear as broad, depositional terraces running subparallel to the coastline and extending inland approximately 100 km to the Orangeburg Scarp. The edge of each terrace consists of a discontinuous sand ridge that represents the remains of an earlier barrier island chain, while the clayey sand plain behind each terrace was once back-barrier, tidal flat lagoons and marshes (Colquhoun 1969). Winker and Howard (1977) have grouped the numerous coastal terrace units into a series of three beach ridge-barrier island sequences that span the entire length of the Coastal Plain of Georgia and South Carolina. The furthest inland of the sequences is referred to as the Trail Ridge-Orangeburg Scarp, located west of the project area. This is a rather dramatic and continuous geomorphic unit that demarcates the boundary between the rolling topography of the Inner Coastal Plain and the flat, terraced terrain of the Outer Coastal Plain (Kovacik and Winberry 1987:20).

Other Pleistocene-age deposits in the Coastal Region include fluvial features such as floodplains, point bars, dune sheets, terraces and Carolina Bays. A frequently occurring feature of the major river valleys is the dune sheet formations that have been dated to the Late Wisconsin (20,000 to 10,000 years B.P.). These features exhibit a parabolic structure and generally occur as a series of southwest-northeast trending ridges located on the eastern edges of river valleys. The outer Coastal Plain segments of the Pee Dee (Thom 1967), Santee (Colquhoun et al. 1972), Savannah and Altamaha rivers all possess this peculiar structure (Mathews et al. 1980). The dune fields typically overlie Pleistocene terrace and floodplain formations in these river valleys. Probably the most impressive of these features are a series of broken sand hills associated with the

Orangeburg Scarp. These sand hills are remnant sand dunes associated with an ancient shoreline that have been reworked and reshaped by wind and river erosion (Cooke 1936). Extending in a north-south line east of the Wateree River, these hills comprise the spine of Sumter County (Ramsey and Green 1922:13, 26). The project area, located in southern Sumter County, is situated on the southern crest of these hills that forms the drainage divide between the Pocotaliao and the Wateree rivers.

Other significant landform features occurring in the project area are shallow, elliptical depressions ranging between approximately 1 and 4 km in length called Carolina Bays (Kaczorowski 1977; Thom 1970). These bays tend to be oriented in a northwest-southeast direction. The sand rims that form around their edges are typically most developed on their southeastern edges. It has long been known that these bays played a major role in the settlement-subsistence strategies of prehistoric and historic Native American groups inhabiting the Coastal Plain region, however, very little documentation concerning the importance of Carolina Bays to Native American groups presently exists. Two Carolina Bays are found within the project area and are named "Big Bay," although at least one source has identified the larger of the two as Juniper Bay. Located near the crest of the sand hills, adjacent to the divide between the Wateree and Pocotaligo drainages, these two bays are poorly drained and are often inundated. The larger of the two bays serves as the source for Sammy Swamp, a tributary of the Pocotaligo. Halfway Swamp, a small tributary of the Santee, drains the smaller bay.

REGIONAL CLIMATE

The climate of the Coastal Plain region has been described as "humid subtropical" (Critchfield 1974), typified by short, mild winters and hot, humid summers. Proximity to the ocean moderates temperatures on the coast, causing lower maximum and higher minimum temperatures than inland locations. Moreover, the growing season is longer, grading from approximately 225 days in the Piedmont to nearly 300 days at the coast (Carter 1974). On the South Carolina coast, average July temperatures reach 27.2° C, while average January temperatures range between 8.8° C and 10° C (Kovacik and Winberry 1987). Summers are dominated by warm, moist, tropical air masses, and precipitation during this season is generally produced by convection storms. Winter precipitation, by contrast, originates from continental fronts out of the north and west. Spring usually represents the driest season, but rare drought conditions can occur in the fall.

INTERRIVERINE UPLAND ECOSYSTEMS

Within the project vicinity, three different ecosystems are known to exist. The most prominent of these in the immediate project vicinity are the upland forest communities generally assigned to oak-pine (Braun 1950), longleaf pine-wire grass, and loblolly-shortleaf pine associations. These upland communities are concentrated on the barrier island facies of the terrace complexes. Swamp communities that form in poorly drained locations, represent the second most abundant type of ecosystem within the project area. In general, the swamp communities occur most heavily on the back barrier lagoon facies, along river bottoms, and in Carolina Bays (Sandifer et al. 1980). Freshwater stream environments constitute a third ecosystem. These are confined to active, river and tributary channels.

From the perspective of prehistoric subsistence, the inter-riverine uplands of the Coastal Plain have been characterized as a perpetual "food-poor" pine barren, dominated by long-leaf pine forests with a very low species diversity (Larson 1970, 1980, Milanich 1971). Reconstructing pre-European forest distributions, however, is difficult due to the impacts of historic (and prehistoric) land use. Consequently, much controversy exists concerning the composition and distribution of "pristine" climax vegetation in the Southeastern United States (Delcourt and Delcourt 1977, 1987; Quarterman and Keever 1962; Shelford 1963).

Quarterman and Keever (1962) have argued that the current closed canopy loblolly-shortleaf pine dominated forests of the Coastal Plain are the product of modern forestry management practices and other types of historic land use, and that these forests were replaced by a Southern mixed hardwood climax when allowed to

mature. Nevertheless, given the abundance of sub-climax soil conditions (e.g., saturation), it is probable that natural forest distributions would have resembled a mosaic of mixed hardwood and pine dominated associations prior to the major period of European land development in the nineteenth century (Brooks and Canouts 1984:10-13, Widmer 1976:9). William Bartram's description of the interior Coastal Plain along the Savannah River in the late eighteenth century conforms well with this reconstruction (Harper 1958:19-20).

Sub-climax conditions also appear to have been fostered by forest fires, which tend to interrupt normal succession processes. An important and once abundant floral community that is maintained principally by fire is the longleaf pine-wire grass association (Platt et al. 1988:491). In its pristine state, this community consists of relatively homogeneous and scattered stands of mature longleaf pine intermixed with occasional oaks and dense clumps of young pines. The understory is primarily composed of low-lying shrubs, and grasses. Wire grass is identified as a dominant plant in this community, due to its consistent association with longleaf pine in old-growth tracts, a factor brought about by its own dependence on fires for reproduction. A recent finding in forestry studies that contradicts earlier assumptions is that longleaf pine-wire grass associations are actually characterized by high species diversity rather than ecological homogeneity (Frost et al. 1986).

The role of Native Americans in perpetuating and fostering longleaf pine forests and savannas through controlled burning, has been appreciated for some time (Platt et al. 1988, Robbins and Myers 1989). Ethnohistoric accounts indicate that a popular form of 'surround hunting' employed by Southeastern aboriginal groups involved the use of fire lines of several miles, set in the dried detritus of the forest floor (Swanton 1946:319-320). In combination with other land modification practices, involving the clearing of forest for settlements and agricultural fields, aboriginal land-use practices not only perpetuated sub-climax forests, but also created pine parklands or savannas.

Widmer's (1976) reconstruction for the area around Lake Moultrie between the Cooper and Santee rivers serves as a useful basis for modeling the pre-settlement (pre-European) vegetation of the interior uplands. He identified three "pristine" subsystems, including the southern mixed hardwood forest, the longleaf pine forest, and pine savannas. Upland communities were primarily restricted to the barrier island facies where soils were drier. Pine-savannas, however, were a specialized community associated with aboriginal swidden or field-rotation agriculture and were primarily confined to well-drained bottomland and stream terraces.

In the Inner Coastal Plain region, mixed hardwood forests are most likely composed of two basic community types in the vicinity of the project area today: sloped mesic hardwoods and upland mesic hardwoods. These two communities appear to approximate the normal range of variability associated with the mixed hardwood subsystem on the South Carolina Coastal Plain. The structure and composition of the sloped mesic hardwood communities correspond closely with Braun's (1950) mixed mesophytic forest type. Dominant tree species in the South Carolina sloped mesic hardwood communities consist of beech, bull bay, laurel oak, red maple, black gum, tulip tree, sweet gum, and loblolly pine. The upland mesic hardwood community corresponds to Braun's (1950) "oak-hickory forest" type and represents the climax vegetation of the Coastal Plain according to Quarterman and Keever (1962). Dominant trees consist of beech, laurel oak, bull bay, white oak, sweet gum, mocker nut hickory, water oak, southern red oak, pignut hickory, and black gum.

Longleaf pine forests occur in xeric, well-drained sandy locations seasonally flooded landforms, and mesic situations where fire has interrupted but not inhibited succession processes (Bennett and Pitman 1991, Platt et al. 1988, Sandifer et al. 1980:439). Longleaf pine forests may be limited to a canopy of predominantly longleaf pine and a limited herbaceous layer composed of such commonly abundant species as wire grass, ported nut rush, camphor weed, beggar ticks, panic grass, broom-straw, bracken fern, aster, goat's rue, and thoroughwort. Longleaf pine succession forests are generally three-tiered, containing a tall shrub layer in addition to the canopy and herbaceous ground cover. The succession forest type eventually developed into mixed pine and pine/mixed hardwood communities. Slash, loblolly, and short leaf pine species often replace longleaf pine.

8

Unfortunately, very little is known about the pine-savanna subsystem. Lawson (Lefler 1967:34) provides a description of one large patch of savanna adjacent to a Congaree settlement in 1701:

... about Noon, we pass'd by several fair Savanna's, very rich and dry; seeing great Copses of many Acres that bore nothing but Bushes, about the bigness of Box-trees; which (in the Season) afford great Quantities of small Black-berrys.... Hard by the Savanna's we found the Town.... The Town consists not of above a dozen Houses, they having other stragling Plantations up and down the Country, and are seated upon a small Branch of Santee River. Their Place hath curious dry Marshes, and Savanna's adjoining to it, and would prove an exceeding thriving Range for Cattle, and Hogs....

Lawson's use of the term plantations conveys the impression that much of the river valley margin of each of the tribes he described was punctuated with these clearings, or savannas, and that some patches were planted while the majority were unattended. The presence of bushes and briers on the Congaree savannas suggests that the abandoned fields may have been maintained within a fallow rotation (Odum 1971:261). Undoubtedly, other succession stages of pine forest were also present along these river bottoms and terraces, reflecting yet earlier concentrations of aboriginal farming communities.

The other major ecosystem of the inter-riverine uplands, is the swamp tupelo community (Sandifer et al. 1980:378). It is concentrated in the low-lying back barrier-lagoon facies where the water table is at, or slightly above, the ground surface. Plant associations in this community consist of hardwoods dominated by tupelo and gum along with subdominants such as red bay, sweet bay, and red maple (Shelford 1963). Loblolly pine, short leaf pine, water oak, white oak, and hickories occur on better-drained topographic features within the larger swamp system.

Fauna of the inter-riverine uplands is typical of terrestrial forests. The pine-mixed hardwood and mixed hardwood communities contain the greatest abundance and diversity of terrestrial fauna. Amphibians and reptiles generally occupy moist habitats within the uplands such as leaf-litter, burrows and temporary pools, and feed on soil fauna and insects. Numerous salamanders, hylid frogs or tree frogs, and toads dominate the amphibious fauna, while a wide array of lizards and snakes comprise the majority of the reptile species. Turtles are rare in the upland ecosystem, and are generally represented by only the eastern box turtle in South Carolina. Birds tend to occupy very specialized niches in the forest and as such their habitat and forest associations tend to be better defined. Pine forests have the lowest densities and species diversity of birds. Only thirteen dominant species are listed for this forest type by Sandifer et al. (1980:465) including the screech owl, red-bellied woodpecker, eastern wood pewee, southern crested flycatcher, the Carolina chickadee, the brown-headed nuthatch, the eastern bluebird, two warblers, summer tanager, and Bachman's sparrow. The ground-feeding bobwhite and the common crow complete the list of dominants.

Thirty-two species of birds dominate upland pine-mixed hardwood and mixed hardwood communities (Sandifer et al. 1980:469-470). The overall structure of this list, however, is very similar to the one produced for the pine communities. The screech owl remains the single large predator and insectivore species are the most abundant. Three species of woodpeckers (ie. pileated, red-bellied, and downy), blue jays, morning doves, Carolina chickadee, Carolina wren, common crows, hermit thrush, the tufted tit mouse, robin, catbirds, the blue-gray gnat catcher, cardinals, and various species of vireos, warblers, and sparrows comprise the list of dominants. Numerous additional moderately important and minor species appear, including various hawks, vultures, owls, insectivores, and the turkey.

Dominant mammalian herbivores of the Upland forests of the Coastal Plain consist of white-tailed deer, squirrels, the eastern wood rat, and the cotton mouse. The opossum and raccoon comprise the dominant omnivores, while major carnivores include the gray and red fox, the striped skunk, the short-tailed shrew, the long-tailed weasel, the bobcat, and the black bear (Sandifer et al. 1980:472-478). Prior to European settlement, cougars, gray wolves, and possibly minor numbers of elk and bison existed in the inter-riverine

uplands (Penny 1950). Mammalian species generally do not occupy overly specialized niches and they can range across very large areas. Deer, however, tend to aggregate in hardwood patches where browse and nut mast is more plentiful. The primary mammalian dominants of old field communities in the region today are the eastern cottontail, cotton rat, eastern mole, least shrew, and the striped skunk (Sandifer et al. 1980:472-473). The marsh rabbit also extends its range into such locations when feeding pressures increase in the swamps. The white-tailed deer, raccoon, and possum are nocturnal visitors that feed in these areas, and are generally accompanied by most of the major mammalian predators of the upland forest.

PALEOENVIRONMENT

A series of climatic changes are responsible for the current climate of the project locality, which should not be taken to represent past climates and associated flora and fauna. Three paleoenvironments, the Full Glacial, Late Glacial, and Post-Glacial, are recognized in the Southeast. The Full Glacial period extended from 25,000 to 15,000 B.P, and was characterized by a dry, cold environment. Glacial ice did not reach as far south as South Carolina, however the state was covered by a boreal forest. Vegetation in the southeastern United States during this time period has been inferred to represent a pine parkland with minor components of spruce, fir, and broad-leaved hardwoods (Watts 1980:392-393; 1983:302-304). Pine comprises 60 to 80 percent of the pollen spectra from this period. Three spruce species appear to have been widespread across the Atlantic Slope during this period, *Picea glauca*, *P. rubens*, and *P. mariana*. The herbaceous dominants are principally associated with prairies today, and included wormwood (*Artemisia*), ragweed (*Ambrosia*), other composites (*Tubuliflorae*), grasses, and sedges. The climate during this period was drier than today, with winter temperatures averaging 15 degrees colder than the modern norm.

The Late Glacial Period, extending from 15,000 to 10,000 B. P., witnessed gradual warming and wetter conditions, with the appearance of deciduous species. Northern hardwood forests dominated by hemlock, oak, hickory, beech, birch, and elm gradually replaced the boreal forest. Some conifers, such as pine and spruce, were also well represented in the hardwood forests. Prairies were interspersed throughout the hardwood forest. These conditions peaked in occurrence between 12,810 and 9,500 B.P. according to pollen cores taken from White's Pond (Watts 1980). The forest vegetation changed from a patchy occurrence, which had characterized the previous period, to a more homogeneous appearance.

The Post-Glacial Period extends from 10,000 B.P. to the present. This period witnessed yet further warming and the advent of the modern climates. Open prairie-like land decreased in size during this period, and hardwood forests with oak and hickory dominating, reached its maximum extent. Between 9,000 and 10,000 B.P., the mesic forests of the Southeastern Coastal Plain were replaced by more xeric-adapted forests of oak, hickory, and pine (Davis 1983). It was also during this time period that the dramatic rise in post-Pleistocene sea level began to stabilize, and by about 9,000 B.P., sea level was only several meters lower than it is today. Current paleoenvironmental reconstruction suggest that both a drop in precipitation and an increase in temperature ushered in the Holocene and ultimately provided the impetus for the continued altitude and latitude migration of the mesic-adapted species northward and upward.

By 9,000 B.P., temperatures were estimated to have been approximately equal to today's. Sometime during the interval between 8,000 to 6,000 B.P., it is hypothesized that temperatures were significantly higher (Davis 1983:176). This interval has been variously referred to as the Altithermal, the mid-Holocene temperature maximum, and the Hypsithermal. It was during this time that the oak-dominated deciduous forest of the eastern United States reached its maximum distribution, and hickory experienced a florescence (Webb 1988:402). By the end of this period, modern vegetation distributions had become established throughout the Southeast.

Between 6,000 and 5,000 B.P. increased moisture brought about by increased precipitation and an increase in sea level (approximately 60 m mean sea level) led to the development of coastal salt marshes, interior

wetlands, and river floodplains. A decidedly new forest type, the southern pine forest, replaced the oak-hickory-southern pine forests along the Gulf Coastal Plain and the Atlantic Coastal Plain as far north as southern Virginia (Delcourt and Delcourt 1981; Watts 1979, 1983; Webb 1988). Associated with this forest type was the expansion of swamp species such as cypress, sweet gum, and tupelo or black gum. Swamps, and the establishment of the southern pine forest in the Coastal Plain appear to have been brought about by the processes that lead to sea level stabilization and accompanying stream gradient flattening. By 6,000 to 5,000 B.P. the formation of the modern swamps along the Coastal Plain was essentially completed (Brooks et al. 1989).

III. THE CULTURAL CONTEXT

INTRODUCTION

The land within what is now The Poinsett Electronic Combat Range is situated at the interface between the welldefined cultural sequences of the North Carolina Piedmont and the Savannah River Valley. In the early historic period this region was occupied by the Sioux tribes of central South Carolina (Santee, Wateree, Waxhaw, and Congaree) (Swanton 1946). These tribes were all members of the Catawba language division, which was also comprised of the Eno branch, the Catawba tribe of north-central South Carolina, and the PeeDee branch of the adjoining region of southern coastal North Carolina and northern coastal South Carolina. It is quite possible that the Sioux affiliation of this larger culture area extended into prehistory. Reasonably welldefined sequences exist for the North Carolina Piedmont (Coe 1964), the North Carolina south coastal zone (Phelps 1983; South 1976), and the lower Santee River Valley of South Carolina (Anderson 1982). These are the basis for the following synopsis of the prehistory of central interior South Carolina.

PALEOINDIAN PERIOD

The earliest period of human occupation in the region is referred to as the Paleoindian period of prehistory. This period dates from approximately 12,000 and 10,000 B.P. and represents the first concrete findings of humans in the southeastern United States. The origins of the Paleoindian period at approximately 11,500 B. P. is the subject of much debate, and there is some evidence to suggest earlier human occupation of the North American continent. Evidence for occupation within the southeastern United States prior to 12,000 B.P. has yet to be conclusively demonstrated. Paleoindian sites are primarily recognized by the occurrence of diagnostic projectile points, most of which have been recovered as surface occurrences. Anderson et al. (1990:53), in their overview of Paleoindian archaeology in Georgia, note that of the 50 Paleoindian fluted points found in the Savannah River Basin, only four have been recovered from excavated contexts.

Anderson et al. (1990:7), following O'Steen et al. (1986) and Anderson et al. (1987), divide the Paleoindian period into Early, Middle, and Late Paleoindian sub-periods. Early Paleoindian is characterized by fluted points comparable to the classic southwestern Clovis point, which are referred to as Clovis and Clovis Variants in Georgia (see Michie 1977:62-65). Clovis Variants are generally smaller that true Clovis points, and Anderson et al. (1990:6) suggests that these "appear to be extensively re-sharpened Clovis points." Alternatively, Anderson et al. (1990:6) suggests that Clovis Variants resemble Simpson points, which are assigned to the Middle Paleoindian period. Middle Paleoindian points includes the Cumberland, Simpson, Quad, Suwannee, and Beaver Lake forms, as well as possibly, the Clovis Variants. Anderson et al. (1990:6-8) note there is considerable "morphological overlap" among these types, making sorting and identification hazardous at best. For this reason, Anderson et al. use the type "Simpson" to refer to fluted waisted and eared lanceolates, and "Suwanee" to refer to unfluted, broad bladed constricted haft points.

Late Paleoindian points include fluted and unfluted Dalton forms, as well as Quad and Beaver Lake points. The latter are considered transitional from the Middle to the Late Paleoindian Period. The Dalton type can exhibit considerable variation in form, which is considered to reflect a long use-life and continual resharpening of such points. Re-sharpening and a long use history of projectile points, are not characteristics of the Paleoindian Period. Anderson et al. (1990:8) and others (cf. Claggett and Cable 1982, Goodyear 1982) suggest such use history reflects a change from a long-range, highly mobile, settlement-subsistence strategy to one more focused on intensive foraging of smaller resource areas. Such a change could be considered a response to climatic warming.

Archaeological evidence suggests that Paleoindians survived as migratory hunters, who focused on the pursuit of large game. The association of Paleoindian artifacts and mammoth remains, Bison antiquus, and giant land tortoise (Anderson and Joseph 1988:102) supports this subsistence/settlement model. The population model offered by Anderson et al. (1990), would suggest population increase in response to climatic warming, and the beginning of a shift away from big-game subsistence to a foraging economy. This transition would be completed in the following Archaic Period. A more intensive examination of Paleoindian settlement is provided by O'Steen et al. (1986), on the basis of work in the Wallace Reservoir. O'Steen et al. (1986) identified four Paleoindian site types, based primarily on the Wallace Reservoir survey data. These were shortterm camps, quarry camps, residential camps, and kill sites. O'Steen et al.'s (1986) analysis of Paleoindian settlement in the Wallace Reservoir suggests that the majority of Paleoindian sites are short-term encampments. In South Carolina, most Paleoindian points have been found along river terraces near the intersection of larger streams and rivers, with smaller streams and creeks. The overall distribution of these points reflects a preference for the coastal plain (Michie 1977). While no Paleoindian points have been recorded for the current project areas, numerous specimens have been documented from the nearby Black River drainage in eastern Sumter County and from southern Kershaw County between Boykin and Camden (Charles and Michie 1992).

ARCHAIC PERIOD

The Archaic sequence has been traditionally divided into three periods: the Early Archaic (10,000-8,000 B.P.), the Middle Archaic (8,000-5,000 B.P.) and the Late Archaic (5,000-3,000 B.P.). In general, the Archaic is viewed as a lengthy time of adjustment to changing environments brought about by the Holocene warming trend and a rising sea level. Caldwell's (1958) model of wide-niche or "broad spectrum" huntergatherer adaptations continues to succinctly define the period. However, the differences between the cultures at either end of the sequence are immense and indicate that major cultural and adaptation changes occurred during the entire Archaic period that might not fit a gradual model of change.

Survey on the Lynches River (Cable and Cantley 1979), as well as excavations near Jefferson in Chesterfield County (Gunn and Wilson 1993) and near Conway in Horry County (Cable et al. 1996) indicate that portions of South Carolina above the Santee River contain an Archaic projectile point sequence nearly identical to the one Coe (1964) constructed for the North Carolina piedmont. Early Archaic forms include, from earliest to latest, the Hardaway Side-Notched and small and large Palmer or Kirk Corner-Notched points.

Representatives of the terminal Early Archaic Bifurcate Tradition (Chapman 1975) are also found in small quantities. The Middle Archaic sequence begins with large square-stemmed and widely side-notched points known as Kirk Serrated and Kirk Stemmed, which are followed by the closely aligned Stanly Stemmed. Next, the Morrow Mountain I and II Stemmed types follow. Then, the Lanceolate Guilford and Brier Creek types follow. Late Archaic points include the early Savannah River Stemmed and Knife types and the smaller Otarre Stemmed point. Pottery makes its appearance in the terminal Late Archaic with the fiber-tempered Stallings series and the sand-tempered Thom's Creek series (see Blanton et al. 1986, Cable et al. 1996).

Early Archaic lithic assemblages are quite similar to those of the Paleoindian period. Projectile points remain stylistically formalized and show evidence of economizing rejuvenation strategies. Hafted end scrapers continue to be well represented and there is an emphasis on the curation and use of high-quality cryptocrystaline raw material such as chert and high-grade metavolcanics. Cleland (1976) has suggested that these attributes indicate a continued focus on the hunting and processing of big game animals. In support of this Goodyear et al. (1979: 104) note that plant processing tools such as grinding stones are extremely rare in Early Archaic deposits. Faunal remains from Early Archaic associations in the Southeast indicate a wide spread emphasis on white-tailed deer, but a variety of smaller game including gray squirrel, raccoon, turkey and box turtle have also been identified (Goodyear et al. 1979: 105). Subsistence data then, suggest that hunting large game (i.e., white-tailed deer, elk, and bison and antelope on the western margin of the eastern woodlands) was indeed a major element of Early Archaic economies, but that there was also significant

energy devoted to nut and seed gathering. The trapping of smaller terrestrial game and aquatic resources (i.e., mussels, fish, turtle, ducks, geese, quail, turkey, beaver, squirrel, skunk, bobcat, opossum, porcupine, raccoon, otter, etc.) was also a major economic force.

A number of settlement models have characterized the Fall Line as the hub of territorially expansive settlement systems during the Early Holocene along the Atlantic Slope. Noting the apparently heavy concentration of Early Archaic points in this zone, Goodyear (1983; Goodyear et al. 1989:44) has speculated that this pattern either evidenced a disproportionately high reoccupation at the Fall Line or its use as a zone of base camp habitation of a prolonged seasonal nature. Anderson and Hanson (1988) later elaborated on this general scheme by proposing a seasonal round for Early Archaic systems in which the Piedmont was exploited during the summer and early fall, the coastal plain was targeted in the spring, and the Fall Line was inhabited during the fall and winter. It is further proposed that the territories of Early Archaic bands were organized linearly along major drainages. Settlement in the interior coastal Plain is thought to have consisted of small foraging residences and specialized logistical extraction camps. Settlement along the coast is poorly understood because the early Holocene coastline is now buried. Evidence documenting the use of shellfish and other coastal resources represents a major lacuna in Archaic research.

The Middle Archaic is generally recognized as the full adaptation to the climatic and environmental conditions of the Holocene, as represented by increased population, increased sedentism, and the formation of more rigid territorial boundaries. Diagnostic projectile points of this period include the Stanly Stemmed, Morrow Mountain I and II, and Guilford Lanceolate types. Typological identification for the latter portion of the Middle Archaic is less secure, and Anderson and Joseph (1988:135) note that Halifax (Coe 1964) and Benton-like points such as the MALA (Sassaman 1985) may represent transitional Middle to Late Archaic forms.

Middle Archaic peoples are hypothesized to have lived in residentially mobile small bands focused on relatively small territories (Anderson and Joseph 1988:133-135; Clagget and Cable 1982; Sassaman 1985; Blanton and Sassaman 1989). Middle Archaic settlement is considered to reflect a restriction of the linear extension of proposed Early Archaic band territories along drainages, and an expansion to include and exploit a greater variety of resources. A number of scholars have argued that the Middle Archaic period saw increased sedentism, intensified reliance on local resources, and more complex sociopolitical organization (Stoltman 1972; Smith 1986; Sassaman 1983; Blanton and Sassaman 1989). Two major settlement models for the South Atlantic slope have been advanced: Sassaman's "adaptive flexibility" model (Sassaman 1983, 1985, 1988; Blanton and Sassaman 1989), and the "riverine-interriverine" model developed and presented by House, Goodyear, and others (House and Ballenger 1976; Goodyear et al. 1979).

Sassaman's model of "adaptive flexibility" views Middle Archaic settlement as highly mobile and expedient. Because of this mobility, Sassaman (1988:5) argued that Middle Archaic sites tended "to be small in size, low in artifact density and diversity, distributed abundantly and widely across the piedmont, and exhibit little interassemblage variation." Sassaman argued that Middle Archaic peoples exploited locally available resources, and migrated on a regular basis in order to reach and utilize these resources. Tools were highly expedient, and within the Piedmont, the preferred raw material was locally available quartz. By nature of this mobility and expedient technology, the typical Middle Archaic site would be the ubiquitous "lithic scatter."

House and Goodyear posited a different model of Middle Archaic settlement, in which base camps were established along the river floodplains and extraction/procurement sites occurred in the upland and interriverine areas in order to exploit locally available resources found in those areas. Thus, while House and Goodyear would also predict a dispersion of Middle Archaic sites, their research would suggest differentiation in site function, contents, and complexity, particularly between the floodplain and the uplands. While the data at present are inconclusive, the relative paucity of large, complex, Middle Archaic sites and the identified characteristics of the Middle Archaic tool kit support the assumptions of Sassaman's "adaptive flexibility" model.

The Late Archaic is transitional to the horticultural-based economies of the Woodland period. Four major trends characterize Late Archaic adaptations across the Southeast: 1) incipient, low-level plant cultivation, 2) dense middens with evidence of dwellings and storage facilities, 3) the initial use of stone and ceramic containers, and 4) intensification of exchange relationships (see Smith 1986:28-42, Steponaitis 1986:373). Most of these are evidenced along the Atlantic Slope. Large shell middens of Stallings and Thom's Creek affiliation occur throughout the coast and coastal plain river valleys of Georgia and central and southern South Carolina and indicate extensive secondary resource exploitation and the establishment of semi-sedentary villages (Claffin 1931, Stoltman 1974). Steatite vessels are widely distributed along the Atlantic Slope and steatite net-sinkers have been found along the coast (Coe 1964:112-13, South 1959, Stoltman 1972). Pottery was also initially produced during the Late Archaic and is now known to have a similarly wide distribution to that of steatite vessels (Phelps 1983, South 1976). Stone technology indicative of seed processing use, such as polished and pecked stone artifacts, mortars, and hand stones, are commonly found in Late Archaic sites, as are subsurface storage pits (Stoltman 1972: 48-49).

The nature of Late Archaic occupation in North Carolina is not well understood at present. Much of the trappings of the Stallings Island culture of the Sea Islands region (i.e. massive shell middens and an elaborate bone and antler industry) are lacking (see Claggett 1982:43), but investigations have been too limited to determine the nature of the subsistence system. Whether North Carolina Late Archaic groups were similarly organized to the seasonally sedentary groups of the interior Southeast and the Sea Islands regions, or whether they were operating at a much lower level of social intensification, is a major research question.

The Late Archaic middens on the southern South Carolina coast are not only large, but also contain a broad range of estuarine and terrestrial subsistence resources and a high diversity of artifactual material. These characteristics have led a number of individuals to suggest that these early shell middens represent intensive multi-seasonal habitations (see also Hemmings 1970; Michie 1974, 1979; Trinkley 1976, 1980). In contrast, the bulk of the shell middens dating after 3,000 B. P. are small and thin with low artifact density and tool diversity.

Documentation of intensively occupied upland settlements from this time period in the Middle Savannah River Valley has led to a reconstruction that stipulates spring and summer aggregation along the river terraces and fall-winter household dispersion into the headwaters of upland creeks (Brooks and Hanson 1987, Sassaman 1983, White 1982). Furthermore, there are indications that the aggregation sites can be grouped into two hierarchical levels, with the largest sites of this type occurring on the ecotones along the fall line (i.e. Stalling's Island, Lake Spring) and coast (Bilbo, White's Mound, Cox). Fall Line aggregation sites are speculated to represent locations where communal anadromous fish harvests were organized and appear to have also served as seasonal villages. Lower level aggregation sites occur near the mouths of tributary streams and they are speculated to represent specialized staging areas for residential groups, prior to summer dispersal. Clearly, similar settlement patterns may typify the Santee, Black, Lynches, and Little PeeDee rivers during the Late Archaic sub period in central interior South Carolina.

WOODLAND PERIOD

The Woodland period in central South Carolina and surrounding regions spans the time interval between 3,000 and 800 B.P. and is divided into "Early" (3,000-2,600 B.P.), "Middle" (2,600-1,200 B.P.), and "Late" (1,200-800 B.P.) sub periods. In most regions of the Southeast the Late Archaic-Woodland transition is seen as encompassing continuity, with patterns of sedentism intensification gradually building in magnitude (Steponaitis 1986:378-379). These patterns consisted of an increased emphasis on gardening and exploitation of seeds, greater adjustments toward sedentary life ways, and elaboration on mortuary ritual and political control.

Perhaps the most significant development distinguishing the early portion of the Woodland period from the Late Archaic is the full-blown emergence of what Ford (1985:347-349) refers to as the Eastern Agricultural Complex. This complex was composed of indigenous species of seed-producing commensal weeds including sunflower, sump weed, goosefoot, may grass, knot weed, small barley, and giant ragweed. The former three exhibit signs of domestication by the terminal phases of the Late Archaic, while the others appear to have been intentionally transported and cultivated in Late Archaic and Woodland contexts. Bottle gourd and squash represented very early Mexican introductions and along with the Eastern seed complex, formed the basis of the Early Woodland gardening subsystem. Maize was a relatively late entrant into the eastern Woodland groups, with an initial date of appearance of about 1,700 B.P. (Yarnell and Black 1985). In spite of the rather substantial evidence for horticultural activities, isotopic analyses of Early and Middle Woodland skeletal populations do not indicate a dependence on cultigens (Bender et al. 1981, van der Merwe and Vogel 1978).

Evidence for sturdy, possibly permanent, houses is abundant from this time interval. Along the Gulf and Atlantic coasts, the massive shell middens of the Late Archaic sub period are replaced by more diffuse scatters of shell that are interpreted as the refuse from individual households (Milanich and Fairbanks 1980). Settlements appear to be small, ranging in size from about 5 to 10 households, and cover less than a hectare in area. Similarly small Early and Middle Woodland settlements with ample remains of houses have been investigated in the interior Southeast and in the mountains and piedmont of the Atlantic Slope (Keel 1976, McNutt and Weaver 1983). Generally, these settlements are viewed as seasonal in nature, but were annually re-occupied. The character of shell midden morphology and dimensions changes dramatically in the Early and Middle Woodland periods along the South Carolina and Georgia coasts, and may reflect strategic shifts toward settlement patterns similar to those chronicled in the ethnohistoric accounts. The large Thoms Creek middens and rings disappear and the remaining shell middens consist of small, diffuse scatters indicative of short-term, seasonal occupation by small groups. Many of the sites of these periods, in fact, do not even contain shell.

The Middle and Late Woodland periods are perhaps the least well known of any of the ceramic bearing periods in the region. The standard representation for Middle Woodland settlement systems along the central South Carolina coast is credited to Milanich's (1971:214-215, Milanich and Fairbanks 1980:71-75) "seasonal transhumance" model developed for Deptford occupations in Florida. The model stipulates that populations in coastal locations maintained a bi-seasonal settlement pattern involving alternating wintersummer habitations on the coast, used to exploit marine and estuarine resources. Fall habitation areas in the interior were used to gather nuts and hunt terrestrial game. The coastal settlements located in the maritime live oak strand are said to represent small, semi-permanent, non-agricultural villages, while the inland habitations are hypothesized to represent temporary fall encampments occupied by separate nuclear family units. There is evidence to suggest that Middle and Late Woodland subsistence-settlement patterns in the region were more diverse and less dependent on coastal resources than those of later Mississippian groups (Brooks and Canouts 1984:250-255, Brooks et al. 1989:96), but the details of these patterns have not yet been effectively modeled.

Equally dramatic settlement shifts have been documented for interior riverine localities of the coastal plain. In the Middle Savannah River Valley, evidence for population in filling has been identified with the abandonment of the large riverine sites of the Late Archaic. The transformation of upland seasonal residences into increasingly permanent settlements during the Early Woodland sub-period has been apparent (Brooks and Hanson 1987). During the Middle Woodland sub-period, infilling is argued to intensify, and river terrace sites are again selected for intense, permanent residential occupation, while dispersed household occupation in the uplands continues and expands into the smaller units. The centralization detected in the Middle Woodland settlement pattern, which might indicate increased social complexity during this interval, appears to fragment during the Late Woodland and a pattern of regularly dispersed, small habitation sites is established.

This Woodland pattern of dispersal may have been manifested much earlier on the northern South Carolina coastline due to an extremely sparse estuarine development here. In fact, no record of sizable Late Archaic or Early Woodland shell middens exists throughout this region or the south coastal zone of North Carolina. During the Mount Pleasant phase, which would correlate temporally with the late Middle Woodland to the south, Phelps (1983:33) observes that there is a shift in small site occupations from tributary streams to major trunk streams on the interior and estuaries in the tidewater zone. He posits that these sites represent seasonal shell gathering camps occupied by only a few extended or nuclear families at any one time. The interior riverine sites are posited to represent similar sized resource extraction camps. Larger village sites may exist, but none have been located and excavated.

Throughout the Southeast and Midwest, the later Early Woodland and the Middle Woodland sub periods mark the beginnings of distinctive mortuary complexes, characterized by the incorporation of burial mound features. These features are commonly regarded as evidence for the emergence of segmented lineages, systems of ranked social status, and "big-man" leadership roles (Brose and Greber 1979, Smith 1986:45-50, Steponaitis 1986:382-383). Typically, such systems are unstable and particularistic. The wide regional diversity in mortuary ritual evinced in these burial mounds is generally regarded as a reflection of these social organizational characteristics.

The Late Woodland has often been characterized as a time of cultural decline. This is primarily because of the apparent simplification of the burial complexes. This view seems biased due to the events surrounding the collapse of the Hopewell Interaction sphere in the Midwest where dramatic declines in the diversity and "exotic" character of grave offerings occurred (Brose and Greber 1979). Over many other areas of the eastern Woodlands, however, the differences are less extreme, and, if anything, reflect a developmental continuum. The burial mound sequence of the Georgia coast exemplifies such a trajectory (Cable et al. 1991, Caldwell and McCann 1941, Thomas and Larsen 1979). It is, nevertheless, generally held that the beginning of this period witnessed a decline in "big-man" authority systems, primarily as a response to population expansion, infilling and dispersal (Smith 1986:52-53). Settlements apparently remained small and subsistence systems changed little, with the possible exception of an increased emphasis on maize agriculture.

As Woodland settlement patterns were very extensive and generalized, there is a high probability that the project area, containing the air base and bombing range contain numerous small, upland residences from this period. The large Carolina Bay on the bombing range has previously been shown to contain a large number of Woodland occupations around its perimeter and many of these are quite likely semi permanent residences of small social units such as nuclear or extended families. Sites of this sort have recently been excavated and reported on in Horry County (Cable et al. 1996).

MISSISSIPPIAN PERIOD

Sometime between about A.D. 1100 and 1200, local ceramic assemblages in western and central North Carolina, South Carolina, and Georgia begin to show evidence of participation in the South Appalachian Mississippian tradition (Ferguson 1971). The initial phase of "Mississippianization", the Savannah phase, extended over a large geographical area including most of Georgia, southeastern Tennessee, western and south-central North Carolina and most of South Carolina. Throughout this area ceramic assemblages are linked together by a distinctive style of complicated stamped pottery generically described as Savannah Complicated Stamped. Design styles of this macro type tend to vary somewhat between localities. This, in addition to differences in other surface treatment types, has served as a basis for identifying a system of regional assemblage variants.

Central and northern South Carolina has never been adequately interpreted within this framework. On the central coast the associated culture or style has been referred to as Jeremy or Jeremy-Pee Dee to emphasize its similarities with the Pee Dee variant of south-central North Carolina (see Anderson 1982; Cable et al. 1991;

Trinkley 1980, 1983). As is true of the Late Woodland ceramics of this region, however, it is probable that a closer fit will someday be made with the Mississippian assemblages of the Wateree (Mulberry Mound) and Upper Santee (Scotts Lake) valleys (see DePratter and Judge 1986).

The Wateree sequence is still in the initial stages of development, but it provides at least an outline of ceramic patterns in the central interior region of South Carolina during the Mississippian period. DePratter and Judge (1986) have organized the material from Mulberry Mound into five ceramic phases based on variation in rim decoration. The Belmont Neck and Adamson phases, the earliest, seem to contain ceramics more typical Savannah types, while the following Town Creek phase ceramics at Mulberry represents a transitional Savannah-Irene or -Lamar phase. The Mulberry phase correlates with early-to-middle Lamar period. Since the Mulberry Mound Site has been correlated fairly firmly with the DeSoto town of Cofitachique, we can assume that the Mulberry phase ceramics associate with the Protohistoric period.

The Mississippian adaptation throughout the Southeast was one of intensified agricultural production and wild resource exploitation that focused on major river floodplains. Smith (1978:483) identifies six major resource groups within this niche complex: (1) backwater fish species, (2) migratory waterfowl, (3) upland game including white-tailed deer, raccoon, and turkey, (4) nuts, fleshy fruits, and berries, (5) seed-producing weeds such as knotweed and goosefoot, both of which were most likely domesticated, and (6) domesticated Mexican imports including corn, beans, and squash. In optimal areas this subsistence economy supported relatively complex chiefdoms comprised of one or more paramount towns and numerous satellite communities of varying sizes and importance. In the larger systems these societies were ruled over by paramount chiefs, while smaller ones may have been managed by a collectivity of lesser chiefs and officials. Tribute was commonly taken from the villages in the system and invested in the chiefly elite and paramount towns.

The project area was situated in the upland hinterlands of the Mulberry and Scotts Lake chiefdoms and away from the optimal Mississippian niche. Consequently, it is not likely that ceremonial architecture or large Mississippian villages would be present. Instead we can expect to find only seasonal extraction camps or small farmstead settlements of the Mississippian period in these locations.

HISTORIC PERIOD

Permanent historic settlement of the project area began in the mid-eighteenth century when settlers penetrated the interior of the Carolina colony after the end of the Yemassee War. Located in Sumter County the project sites lie within the area long known as the sand hills just south of the High Hills of Santee. Prior to settlement by English speaking colonists, the region was occupied by the Santee and Wateree Indians, who lived and hunted along the rivers and streams that now bear their names. Many of the local tribes took part in the Yemassee conflict of 1715, and were nearly extinguished. Others fled to Spanish held lands to the south and French holdings to the west (Haan 1982:342).

As Indian hostilities subsided, efforts were made by the Governor of Carolina to encourage settlement. He proposed a system of ten Townships in the interior of the colony (Kreisa et al. 1996). By 1739 a strip of land ten miles wide on the east side of the Wateree River from Fredericksburg to Jacks Creek was reserved for settlers from Scotland. This strip of land encompassed the three historic sites in the study area. Although the Scots did not arrive to take advantage of the reserved land, others did come and between 1745 and 1759, some 70 land surveys were made in the area (Gregorie 1954:12). During the period between 1730 and 1760, the population of South Carolina more than doubled from 30,000 to 83,000. Much of this development took place in the interior (Kovacik and Winberry 1987:77).

Settlement of the interior was primarily along the rivers and streams and also adjacent to the "Catawba path." Used by Indian traders in search of deerskins as early as the 1680s, the Catawba path paralleled the east side of the Wateree River (Kreisa et al. 1996). In 1753 the path was made a public road and efforts were

made to improve transportation by clearing the roadway and the Wateree River. Two of the project's historic sites, 38SU195 and 38SU148, lie just east of the public road from Camden to Charleston also known as the King's Highway, or modern SC Route 261. Small farmsteads were established in the valleys along the waterways where nutrient rich farming soils occurred. Grants were distributed based on 50 acres a head for each family member and seldom totaled more than 500 acres (Gregorie 1954). Subsistence farming was undertaken adjacent to the watercourses where root crops and vegetables as well as corn and wheat were grown. Herding was also an important activity in the area, Gregorie (1954), reports that one local family marked between 800 and 1,000 calves every spring, numbering their herd at over 2,000 head of cattle.

In addition to subsistence farming and herding, tobacco was cultivated for home use, rice was grown in the lowlands and indigo became an important cash crop. The swamp lands adjacent to the Wateree were improved by a series of dams to better accommodate the cultivation of rice and indigo. The dwelling houses of the early settlers were simple one or two room log structures constructed on the edge of the swamps, purportedly so the planters could view their slaves working in the fields (Woodmason 1953).

It was during this period of settlement in the 1750s that an influx of settlers from Virginia arrived, including the James family who obtained a grant on the Catawba path. Along with the James family came Matthew Singleton who obtained a grant of 500 acres that probably became the nucleus of his Melrose Plantation just west of the project sites (Gregorie 1954). William Richardson arrived from Charleston during this period and built Bloom Hill Plantation in the sand hills east of the Wateree River. By the 1770s many established planters began to build summer residences in the sand hills and the High Hills to the north in an effort to escape the malaria and "damp moist situation" of the swamps. In 1826 Mills wrote of the High Hills: "the planters from below resort here to breathe the salubrious atmosphere of these hills, and many gentlemen habitually reside amongst them, whose affluence and hospitality give to the place a character of ease and dignity". With the establishment of saw mills along the creeks, the improving economic situation of the early settlers, and the arrival of wealthy planters from the lowcountry, larger and more elaborate frame residences were being constructed along the public road from Camden to Charleston.

Local events tied to the American Revolutionary War took place east of the Wateree River and were generally connected to the struggle for control of the public road from Camden to Charleston. This road was a major transportation route for both the British and American armies, and a number of small skirmishes were fought in the area. As the British forces descended upon Charleston in 1780, refugees fled to the interior, some staying at Bloom Hill Plantation south of the project sites. The British forces soon spread throughout the interior and established a post at Camden and a redoubt at Nelson's Ferry to safeguard their communications along the public road. As the War progressed and the Americans began to regain control of the interior under the command of Francis Marion and Thomas Sumter, British and American troops moved up and down the public road, occasionally taking part in brief altercations. General Nathaniel Greene established encampments at Colonel John Singleton's Midway plantation and at William Richardson's Bloom Hill plantation. It was at Bloom Hill that General Greene and Governor Rutledge "matured their plans for the final expulsion of the British" (Gregorie 1954:54). The war ended soon after with the surrender of Cornwallis at Yorktown.

Conditions for those in the Sumter District were difficult after the War, as was the case throughout the state. Although no major engagements took place in the area, many homes and barns were burned, slaves were carried off and horses, cattle and supplies were stolen (Gregorie 1954). In addition to the physical destruction of the landscape, the British discontinued issuing a bounty for indigo. This resulted in the abandonment of that cash crop by local planters. Despite these setbacks, the planters continued to establish residences in the sand hills and along the King's Highway.

A small cluster of homes owned by the Moores, Ramsays, Ballards and other rich planters was constructed at a crossroads along the Camden-Charleston Road, forming the nucleus of a settlement called Manchester. The small settlement was first mentioned in the documents of Joseph Johnson who was traveling through the area in

1795 (Kreisa et al. 1996). Originally established as a summer settlement for wealthy planters, Manchester also boasted a tavern and a creek landing. This provided convenient access to the Wateree River. As cotton became the new commercial crop of the area due to the invention of the cotton gin in 1793, Manchester's location made it a natural hub for shipping cotton to the markets of Charleston via the adjacent waterways. Artisans, craftsmen and other professionals arrived at the settlement and by 1811, Manchester contained, in addition to the tavern, "a shoe shop, tailor shop, blacksmith shop, a log schoolhouse, and two or three stores" (Scott 1884:12). The town is said to have been located on both sides of the Camden to Charleston Road (modern SC Route 261) and laid out in a "regular plan." Early deed references describe lots ranging in size from 50' by 100' to 300' by 500'. Some street names mentioned in early deeds include Main Street, King Street and Queen Street. The 1821 Map of Sumter District surveyed by S. H. Boykin and improved for Mills Atlas in 1825 shows the town of Manchester with a number of roadways radiating from the immediate settlement (Boykin 1821/1825).

Ramsey (1926) lists the following families as being residents of Manchester; the Ballards, Braceys, Butlers, Cains, Dunbars, Edwards, Goodmans, Hays, Moores, Pitts, Polks, Ramseys, Scotts, Thirtles, and Williams. He also states that the Boyds, Campbells, Elliots, James, Lynchs, Moncks, Owens, Shields, Spanns, Springs and Tindals were also inhabitants of the town during its existence. The town was also a gathering place, where planters and their families could take part in social activities, sports and entertainment. Just south of Manchester, a ball alley was constructed to facilitate a game called "fives". The game required a wall approximately forty feet long by thirty feet high and a corresponding alley, and was played by two teams of five to twenty or more players. Some of the other activities enjoyed by the planter society in the Sumter District were billiards, card-playing, cockfighting and horse racing. Manchester was well known for its horse racing and several racecourses were located in the area. The Mills Atlas Map of Sumter District shows a "Race Turf" belonging to "R. Singleton" southeast of town.

In the mid-nineteenth century the railroad came to Manchester, replacing the river as the primary means of transporting cotton and other staple crops to market. The Wilmington and Manchester Rail Road was completed in 1852 and its route passed about a mile south of town. The small settlement grew very rapidly and by the time the railroad was completed, Manchester was being referred to as a city. In January of 1855 tragedy struck the thriving town when a fire swept through and destroyed approximately one-fifth of its structures (Gregorie 1954). Evidence suggests that after the arrival of the railroad, the populated center of Manchester shifted toward the train depot located south of town. Scott (1884) writes that by 1860 Manchester contained only two structures, the tavern and the schoolhouse. It may be that Gregorie's description above is referring to development adjacent to the railroad facilities while Scott is describing the original town site at the crossroads on King's Highway.

The early nineteenth century saw the heyday of King Cotton, not only in the local area, but throughout the South. The planters east of the Wateree River continued to accumulate wealth due to the cotton boom, while many farmers relocated to Georgia, Alabama and Mississippi where new lands could be obtained cheap (Kreisa et al. 1996). South of Manchester, the Brouns, Belsers, Singletons, Richardsons, and Mannings, all maintained large holdings along the Camden-Charleston Road. The demographic make-up of the district was altered as more and more farmers obtained slave labor. By 1860, the local population was about 70 percent African-American (Kreisa et al. 1996).

During the Civil War, the area became a center for army stores due to the presence of the Wilmington and Manchester Railroad. The Sumter District was relatively unscathed until the closing months of the war when Sherman began his march through the Carolinas in early 1865. After Sherman skirted Sumter to the west and north, Brigadier General Edward E. Potter was dispatched to the area from Georgetown with a force of 2,700 men. Their mission was to destroy the rolling stock left stranded on the tracks between Florence, Manchester, and Camden. After defeating a small militia force near Sumter on 9 April 1865, Potter's men burned the railroad facilities near the town and burned the depot and warehouses in Manchester. From this point, Potter

sent his troops north and west along the railroad where they destroyed water tanks, cotton gins, trestles, locomotives and rolling stock. After reaching Stateburg and Camden, Potter and his forces marched back through Manchester, arriving at Milford Plantation, the home of former Governor John Laurence Manning. Shortly thereafter, Potter learned of the end of the war, by which time he had destroyed 32 locomotives, 250 railroad cars, 100 cotton gins, 5000 bales of cotton and 1,000,000 board feet of lumber. Portions of Manchester, Sumter and Stateburg were burned; horses, wagons and supplies were confiscated; and more than 5,000 slaves had joined Potter's column (Kreisa et al. 1996).

The years after Potter's Raid were difficult for the residents of the Sumter District. Besides the task of rebuilding all that had been destroyed, most planters and farmers had to establish new agricultural practices as a result of Reconstruction. Eventually, tenant farming and sharecropping became the norm and agricultural production in the area recovered (Kreisa et al. 1996). The Wilmington and Manchester Rail Road also recovered and reopened for limited traffic in the fall of 1865, although financial difficulties resulted in its sale by 1870. The line was then renamed the Wilmington, Columbia and Augusta Railroad and a new route was established from Sumter to Columbia, through Wedgefield, bypassing the facilities at Manchester (McLaurin 1878). The old rail line was abandoned and most businesses relocated to Wedgefield leaving the town deserted. Cut off from major transportation networks, Manchester was unable to survive and was soon abandoned.

Relatively poor economic conditions in the last decade of the nineteenth century resulted in a decrease in the average acreage of local farms and the subdivision of many of the larger plantations. A transition from cotton to tobacco also took place during this period, and was accelerated by the arrival of the boll weevil in the 1920s. Farms along the Camden-Charleston Road south of Manchester remained primarily intact into the twentieth century due to increased lumbering activities. (Kreisa et al. 1996). Eventually, however, this enterprise too became exhausted, leading to the collapse of the larger holdings. By 1920 only 13 farms in Sumter County contained 1,000 acres or more (Ramsey and Green 1922:59).

Most of the land on the east side of the Camden-Charleston Road was eventually subdivided into smaller farming units, but this did not occur until the turn of the nineteenth and twentieth centuries. In 1907, a local soils map shows only a few buildings south of the railroad and east of the Camden-Charleston Road (Soil Survey of Sumter County 1907). Settlement was definitely thicker by the time of the 1935 soils map (Soil Survey of Sumter County 1935). The apogee of settlement in this area is indicated on two surviving county road maps, dated to 1938 and 1941 (General Highway and Transportation Map, Sumter County 1938; 1941).

Much can be said about the nature of these new communities from information preserved in the original Manchester Township schedule sheets of the 1920 census, now on file at the South Carolina Department of Archives and History. Unlike earlier census recorders, the 1920 census taker noted the main roads that were traveled to reach the people he interviewed. And there were basically two roads in the Manchester Township: the Charleston-Camden Road, and the Pinewood-Sumter Road. These roads present very different pictures of settlement. Along the Charleston-Camden Road, the vast majority of the inhabitants were listed as either black or mulatto. In fact, the only families that were identified as white along this stretch of the road were those of Earl Williams, John Griffin, Charlie Bartlette, the Alsbrooks, the Coutters, and the Colters. Along the Pinewood-Sumter Road, the situation was reversed: most of the inhabitants were white, with families that had been in the area since at least the 1880 census and probably before: Weeks, Ardis, Geddings, and McLeod.

Unintentionally perhaps, the 1920 census taker had recorded a pattern of settlement that had existed since antebellum times. In Manchester Township, and probably in adjacent townships as well, the larger plantations had been established along the Wateree River and its tributaries, and these were the settlements served by the Charleston-Camden Road. As usual, these plantations were characterized by white owners and a work force comprised of large numbers of enslaved African-Americans. The poorer whites, with few or no slaves, settled on less desirable lands further to the east, in the area of what was, in 1920, the Pinewood-Sumter Road. This

situation was basically preserved until the early 1900s, when the larger holdings along the Charleston-Camden Road tended to collapse and the basically black population of the area began to occupy small holdings on the east side of the road. By 1920, despite the presence of these small, usually black-owned holdings, most of the African-American inhabitants along the Charleston-Camden Road were renters. This was even the case with many of the whites along the Pinewood-Sumter Road.

By the mid-1930s, with Roosevelt's New Deal in full swing, the project area had been pegged as a sub-marginal agricultural zone in need of federal assistance. Plans had already been made to relocate the population of this area to more productive lands, and this "Land Demonstration and Use" project paved the way for the creation of both Manchester State Forest and Poinsett State Park, and eventually Poinsett Weapons Range. The appraisal reports that resulted from this project provide the most comprehensive information that exists on these early twentieth-century sites. To understand this information better, however, it would help to know the nature of the project area in the early years of the twentieth century, as well as the agricultural impact of the New Deal.

In the early 1900s, when the historic features at 38SU196 and 38SU150 were established, Manchester Township, and the adjoining townships of Middleton, Fulton, and Privateer, were characterized by a rural, agricultural way of life that was in many respects a hold-over from the antebellum heyday of "King Cotton." As farming spread into the relatively infertile Sandhill area of Manchester, agriculture became increasingly marginal, as cotton and corn were grown in areas ill-suited to cultivation. The most fertile areas, near the river bottoms, were in the hands of the largest landowners, most of whom were absentee. Most were also white, as were the local merchants. Beneath this upper stratum was hierarchy of small farmers, and in the local area, most of these were black. These farmers ranged from small independent operators of around 50 acres, to tenant farmers working with much less and forced to pay cash rent or a percentage of the crop (Hester 1996: 1-3).

Out of the 168 families in Manchester Township in 1920, only 37 percent were independent farmers owning their own land; the rest were tenants. African-Americans comprised 89 percent of the local population, and the vast majority of the tenants were black. A typical holding of that time consisted of a mix of agricultural and forested land, usually with a ratio of two-thirds to one-third, respectively. Most of the fields were devoted to cotton and some corn, while the wooded areas were usually the result of abandoned and exhausted fields. The economic return on these holdings was marginal at best and the quality of the housing was poor (Hester 1996:2-6).

The condition of the local forested areas was also rather poor. Most of the commercially valuable timber had been harvested between 1890 and 1920. Since fire was the preferred method of clearing new land, this led to the dominance of longleaf pine and turkey oak among the existing stands of trees (Hester 1996:6). Even though the wooded areas were no longer economically viable, they were useful to the local farmers, if only as a source of firewood.

The poverty of the rural South was already legendary when the Dust Bowl of the 1920s and 1930s added much of the Great Plains to the nation's agricultural woes. By the 1920s, various reformers saw the need to control the sort of unfettered agricultural growth that resulted in the over-production of marginal lands and depressed farm prices. These reformers got a chance to implement their agendas after the inauguration of Franklin Roosevelt in 1933. Responding to the dislocations created by the Great Depression, the Roosevelt Administration, with the full support of Congress, orchestrated a wide range of economic and social programs that were commonly referred to as the New Deal. Agricultural reform was high on the New Deal agenda, and the instrument of this work was the Agricultural Adjustment Administration, set up in 1933 and run by the new Secretary of Agriculture, Henry Wallace (Hester 1996:8; Encyclopedia Britannica, 15th Edition 1986, 1:155).

The Agricultural Adjustment Administration, or AAA, was established to purchase sub-marginal agricultural lands, relocate the farmers on those lands to better sites, and put the sub-marginal lands to more appropriate use, whether that was grazing or forestry (Hester 1996:8). The AAA, in conjunction with the Emergency Relief Administration, began work in Manchester Township in 1934. Sub-marginal farmers were to be bought out and moved to a planned community called Tiverton Farms. Their old lands were to form the nucleus of the Poinsett State Park and the much larger Manchester State Forest. This development would not only encompass almost all of Manchester Township, but parts of Middleton, Fulton, and Privateer townships as well (Hester 1996:9-10).

The AAA began appraising and purchasing lands in Manchester Township in 1934, but most of this work was done in 1935. Even after the purchase, many sellers were allowed to remain as tenants for a year or two. After the AAA was declared unconstitutional in 1936, the purchasing program was completed by the Resettlement Administration, or RA (Hester 1996:11; South Carolina State Commission of Forestry 1940; Encyclopedia Britannica, 15th Edition 1986, I:155).

The work of the Resettlement Administration, later carried out by the Farm Security Administration, was geared toward a number of complimentary goals. The RA sought to assist the South's poorest farmers toward independence, eliminate their dependence on cotton, and establish new farming communities based on land ownership. The RA worked on these goals hand in hand with the National Park Service, which had as its aim the creation of state parks throughout the nation, using sub-marginal lands made available by the RA (Hester 1996:8-9).

In Manchester Township, these efforts led to the creation of Poinsett State Park and Recreation Demonstration Areas, built by the Civilian Conservation Corps (CCC). Immediately to the north, and much larger in area, was the Poinsett State Forest (later, the Manchester State Forest), established in 1939 and operated by the South Carolina State Commission of Forestry, in agreement with the U.S. Department of Agriculture (Hester 1996:9; South Carolina State Commission of Forestry 1940).

By 1940, there were only 82 families living on Forest property, and 74 of them were African-American. By 1945, the number of local families was down to 34 (Hester 1996:12; South Carolina State Commission of Forestry 1940). By 1956, the number of houses left standing was down to 26 (Hester 1996:12). The year before, in 1955, the U.S. government had formally deeded the land, now known as Poinsett State Park and Manchester State Forest, to the South Carolina State Commission of Forestry (Deed Indenture between the United States and South Carolina State Commission of Forestry 1955). The Poinsett Weapons Range, which began in the 1950s, was wholly formed from Manchester Forest lands. All of the original records from the 1930s of farm and land appraisals, sales, acquisitions, and leases, are still in the possession of the Manchester State Forest, and its headquarters is just east of the Poinsett Weapons Range.

IV. RESEARCH DESIGN AND **METHODOLOGY**

According to the National Park Service properties that are considered eligible for listing in the National Register of Historic Places are those that possess integrity of location, design, setting, materials, workmanship, feeling and association and:

And associated with events that have made a significant contribution to the broad patterns of our history;

Are associated with the lives of persons significant in our past;

Embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction;

And / or have yielded or are likely to yield information important in history or prehistory.

Archaeological sites are generally evaluated using Criterion D as noted above. However in addition to meeting Criterion D, archaeological sites or properties must possess integrity of location, design, setting, materials, workmanship, feeling and association. In addition to the criteria established in the National Register guidelines, archaeological site determination often depends on the use of physical characteristics to determine a resource's research potential. These physical attributes consist of variety, quantity, integrity, clarity, and environmental context.

In addition to the criteria suggested above, additional steps suggested in the Guidelines for Evaluating and Registering Archeological Properties, (Little et al. 2000) were used in the evaluation process to determine a site's eligibility or ineligibility for inclusion into the National Register. These steps include:

identify the properties data sets (e.g. lithics, subsistence data, ceramics, sub-surface features, etc.) or categories of archaeological, historical or ecological information;

taking archaeological integrity into consideration, evaluate the data sets in terms of their potential and known ability to answer research questions;

identify the "important" information that an archaeological study of the property has yielded or is likely to yield.

On the basis of this evaluation process the four archaeological sites investigated during Phase II testing will be recommended as eligible or ineligible for inclusion in the National Register of Historic Places. Research methods employed for the historic and prehistoric sites are discussed below.

FIELD METHODS

The principal methods used in conducting the archaeological evaluation of the four sites consisted of shovel testing, test unit excavation and mapping. The first task was to establish a datum point. Previous

archaeological work at all three sites had established datum points which if relocated were incorporated into the newly established Phase II grid. The datums for all sites were designated N 500/E 500.

With the datum in place, a metric grid oriented towards magnetic north was established across the site. The first phase of the field investigation consisted of the systematic excavation of shovel tests along site grid lines. Grid spacing varied from 10 to 30 meter intervals. Individual shovel tests measured 40 x 40 cm in diameter and were excavated to a depth of 80-100 centimeters below surface. All excavated soils were screened through 1/4inch hardware cloth for systematic artifact recovery. All shovel test profiles were recorded using standard terminology, and data was recorded on standardized forms for each shovel test, which included the presence or absence of artifacts, depths of artifact recovery, stratigraphy, and additional comments deemed important, by the field technicians.

Following the completion of shovel test excavations, test units were excavated. The placement of test units was generally determined by the results of the shovel tests. Test units were situated in areas that had a high artifact density or unique artifacts likely to yield important information. Typically, test units consisted of one-meter squares, and were excavated by arbitrary levels within the natural strata. The plow zone was removed as a single level, and the soils below were excavated in 10-centimeter levels to facilitate recordation. Unit excavation was generally terminated when two contiguous sterile levels were excavated. Soil from each level was screened and the artifacts recovered were stored by provenience for processing at a later date.

A standardized unit excavation form was completed for each unit. These forms described the work undertaken and recorded the results of the excavation which included soil characteristics, levels elevations, artifact content and cultural and natural features. Soil types and textures were noted and soil colors were identified using the Munsell Soil Color Chart. In addition, plan/section drawings and photographs were completed for each excavation unit. The northeast corner was used to designate each of the units.

Cultural features, when encountered, were photographed and drawn. Notes were also taken prior to excavation. All individual features were recorded using individual standardized forms. Each feature was excavated separately and screened. If warranted, soil samples were retained for processing later in the laboratory. Upon completion of fieldwork, all shovel tests and excavation units were back-filled.

ARTIFACT ANALYSIS PROGRAM

All prehistoric and historic artifacts were returned to New South's Stone Mountain Laboratory, Stone Mountain, Georgia facility for processing and analysis. Initial preparation included washing and drying the artifacts and then rough sorting the materials into broad artifact classes. All of the materials were then analyzed according to the procedures described below.

PREHISTORIC ARTIFACT ANALYSIS

Lithics Analysis

The lithic analysis program was designed to record information on raw material type, functional class, breakage patterns, and size distributions to address issues related functional activity analysis reconstruction and the identification of cultural and natural formation processes. Lithic artifacts collected during the project were first subjected to an initial sorting procedure to derive broad technofunctional categories (i.e., debitage, hafted biface, core, etc.). The debitage analysis consisted of a three dimensional design following the suggestions of Blanton et al. (1986:103-104). The first dimension recognized debitage reduction stage types. The second dimension describes the type of non-debitage materials, i.e., cores, tools, preforms and utilitarian lithics (fire-cracked rock, slabs, grinding stones, etc.). The third dimension identifies raw material type. Hafted bifaces and other formal tools were classified in accordance with existing typologies and each was subjected

to metric description of morphological features. All tool classes were measured and weighed and raw material type was recorded for each item. Other attributes were recorded for tool and core classes as appropriate to describe breakage and wear patterns. Size categories were also recorded for each lithic item to provide data necessary for identifying and evaluating cultural and natural formation processes. Each of these dimensions is further discussed below.

Ceramic Analysis

The ceramic analysis was structured in such a manner as to address four topics directly bearing the research objectives. These include 1) culture-chronology, 2) site-level micro sequencing, 3) functional activity analysis, and 4) cultural formation process identification.

The culture-chronology analysis was initiated with a rough sorting of the assemblage into separate surface treatment categories. Once this was accomplished, a multivariate attribute analysis was devised for each of the categories so that variation within identified culture historic types could be monitored. General categories of attributes within each surface treatment class included: 1) temper constituency, 2) percentage of temper, 3) paste hardness, 4) exterior and interior surface colors, 5) core color and firing patter, and 6) interior finish. Design attributes for each category were tailored to address the specific attributes of particular surface treatments (i.e. width of cord impression, cross-stamping, warp and weft characteristics of fabric impressed examples, etc.). These variables were selected to explore the variability in the assemblage and to define attribute clusters. These fine-grained clusters in turn served as the basis for construction micro-seriational models that informed on the micro sequencing of occupations at the sites.

Attributes of vessel form and function were also monitored to address issues related to activity analysis and settlement pattern. The analysis program involved a multi-attribute study. Attributes monitored were characteristics of the rim (i.e. bowl/jar distinction, curvature, shoulder morphology, decoration, thickness), and base (form, decoration, and thickness). In addition, wear variables were recorded according to type and location (i.e. body sherd, rim, lip, base, shoulder). This analysis was performed for all non-eroded sherds.

Degrees of erosion and sherd size were recorded for the entire assemblage to aid in the identification of cultural and natural formation processes (Schiffer 1987). Both of these variables have been applied successfully to deposit formation studies undertaken with the Spanish Mount ceramic assemblage (Cable et al. 1993).

V. PREHISTORIC ARTIFACT ANALYSIS

This chapter presents an overview of the attributes and typologies used in the analysis of the prehistoric artifacts recovered by the testing project as well as summary statistics on the frequency of various artifact classes for the project. The typologies used in the analysis of the historic artifacts, as outlined above, are broadly accepted by the historic archaeological community and hence are not described in detail. Summaries of historic artifacts are provided on a site by site basis in the following chapters.

LITHIC ANALYSIS

The methods employed during the present lithic analysis were designed to document the occupational history of the project area sites in addition to providing some information on how these sites functioned in the adaptive systems of past human groups. This task is best accomplished by monitoring variation in the formal and functional characteristics of artifacts along four levels: 1) variation in raw material selection for tool manufacturing, 2) functional variation in tool categories, 3) the identification of culture-historic diagnostics, and 4), variation in the production stages of artifacts. The identification of culture-historic diagnostics is critical to observing sites in terms of their occupational histories and defining individual occupational components within larger site sittings. This is particularly true for sites located at Poinsett where cultural features containing artifacts are rare and radiocarbon samples are often contaminated by natural depositional processes. Variations in tool type frequencies, raw material selection, and fracture patterns within and between occupational components and sites reflect the differential distribution of specific activities over the landscape. Finally, monitoring the representation of tool manufacturing stages through debitage, core, and biface classes reveals information about how groups integrated and planned the maintenance of their tool systems around their subsistence activities in the project area.

The following discussion will describe previous archaeological interpretations of raw material use in the Coastal Plain, probable source localities, and the raw material composition of the lithic artifact categories found at the project area sites. Also described will be the major lithic artifact categories and specific types of artifact classes included within each artifact category.

RAW MATERIAL SELECTION

Prior to 1980s, archaeologists have characterized the Coastal Plain as a region containing relatively few sources of raw material suitable for the production of stone tools (Anderson 1979:12). Over the past two decades however, archaeological research has begun to contradict the idea that this region was devoid of lithic material. Studies in the Middle Coastal Plain and the outer region of the Lower Coastal Plain have shown that lithic resources were locally available in the main river drainages, smaller tributaries, and in the upland divide.

One of the best-documented raw material source areas in the Coastal Plain is along the lower Santee River near the Mattassee Lake Sites (Novick 1982:137-206). At this location, which is approximately 70 km east of Big Bay, the river has cut through the Black Mingo bedrock formation exposing large outcrops of workable stone. Excavations conducted at the Mattassee Lake Sites (38BK226, 38BK229, and 38BK246) documented the presence of extensive quarrying activities where orthoquartzite, white chert, tan chert, and blue chert were obtained by Early Archaic through Mississippian period groups.

Additional sources of chert raw materials have been reported along the Santee, Congaree, and Wateree Rivers. In Clarendon County north of the Lake Marion dam and west of the Mattassee Lake Sites, site 38CR33 yielded evidence of quarrying behavior associated with a blue fossiliferous chert that apparently outcrops in the local Santee Limestone formation (Novick 1982:127). Further east of Clarendon County, Michie (1977, 1980) has documented the presence of a chert outcrop along the lower Congaree River. Manchester chert (a highly fossiliferous, purplish colored chert) is also known to outcrop in Sumter County, within the Manchester State Park (Anderson 1979:32, Novick 1982:128). Manchester chert is darker and more lustrous than the chert found at 38CR33 and occurred in the Mattassee Lake Sites' collection. Previous work at Big Bay (Cable and Cantley 1998, Cliff et al. 1999) has documented the presence of a number of fossiliferous silicate cherts that most likely occur along the Santee River just a few kilometers south of the sites. In addition, these sites contained a large amount of rhyolite raw material that originates in the Piedmont region. At present, it is not

known if groups were transporting this material directly from the Piedmont or if they were procuring it from the major river drainages within exposed gravel bars. A small proportion of the tool and debitage collection

exhibited cortex thus providing some evidence for this latter scenario.

Besides the main river drainages, another source for raw material can be found in the smaller tributaries and upland divides of the Coastal Plain. In the Aiken Plateau region, smaller tributaries have eroded through the upper sediments and exposed large quantities of fossiliferous cherts of the Barnwell Formation (Sassaman 1993:38). Work in the Francis Marion National Forest resulted in the discovery of two quarry-reduction sites, the Alvin Quarry Site (38BK780) and the Betaw Site (38BK1238), that are located within interfluvial upland contexts (Cable 1993). Both of these sites exhibit clear evidence of early stage lithic reduction of locally available orthoquartzite and fossiliferous silicate cherts. The terrain in this area is dendritic with relatively high relief, which periodically may have exposed the underlying Black Mingo and Santee Limestone formations in the interfluvial creeks. A similar situation could be postulated for the Black and Pocotaligo rivers, which crosscuts the Black Mingo formation east of the Big Bay area. In addition to the possibility of the occurrence of fossiliferous cherts in these two drainages, archaeological investigations undertaken at the headwater region of the Black River documented prehistoric use of local egg-sized quartz pebbles (Blanton et al. 1986:111). The number of commercial gravel pits that occur throughout Sumter County today is a good indication of the abundance of quartz pebbles in the locally occurring deposits that surround the project area.

LITHIC RAW MATERIAL DESCRIPTIONS

Raw material descriptions follow those provided by Ms. Rebecca Cerajewski of the Geology Department at the University of Georgia who analyzed thin sections of lithic materials collected at several sites surrounding Big Bay (Cantley and Cable 2001:116-120). The results of this analysis are presented below. Appropriate geological terminology characterizing each thin section is provided, although throughout the report the more concise, archaeological terms for each category are used.

White Fossiliferous Isotropic Chert

Geologic Name: Siliceous travertine deposit

Microscopic Characteristics: abundant micritic bacteria-like 'grains'; chemically precipitated chalcedonic-rimming cement; some phosphorus; some megaquartz

White fossiliferous isotropic chert exhibits the same color range as the white fossiliferous silicate chert but, is more waxy to the feel due to the increased amount of chalcedony in the rock matrix. This material is believed to be a component of the Santee Limestone formation that outcrops along the Santee River in Calhoun County.

Bluish-Grey Fossiliferous Chert

Geologic Name: Silicified Fossiliferous Packstone-Grainstone

Microscopic Characteristics: abundant microquartz-replaced mollusc grains; isopachus chalcedonic cement; most intergranular cement is megaquartz; microquartz matrix; few detrital quartz grains.

Brown/Tan Fossiliferous Isotropic Chert

Geologic Name: Siliceous Travertine Deposit

Microscopic Characteristics: abundant peloidal bacteria-like 'grains'; chemically precipitated chalcedonic-rimming cement; some megaquartz

Brown/Tan fossiliferous isotropic chert exhibits the same color range as the brown fossiliferous silicate chert but, is more waxy to the feel due to the increased amount of chalcedony in the rock matrix. This material is believed to be a component of the Santee Limestone formation that outcrops along the Santee River in Orangeburg, Calhoun, and Clarendon counties.

Allendale chert

Geologic Name: Siliceous Travertine Deposit

Microscopic Characteristics: abundant micritic bacteria-like 'grains'; chemically precipitated chalcedonic-rimming cement; greater abundance of phosphorus; some megaquartz

Allendale chert is a fine-grained brownish yellow (10YR6/8) to very pale brown (10YR7/4) chert (Novick 1982:126). This chert occurs along the lower Savannah River in Allendale County. It is generally considered the highest quality material native to the Coastal Plain.

Orthoquartzite

Geologic Name: Quartz-cemented Quartz Arenite

Microscopic Characteristics: subrounded to subangular quartz grains with chalcedonic rimming cement; some megaquartz

Orthoquartzite is pale brown (10YR 6/3) to very pale brown (10YR 7/4) in color and is composed of chalcedony cemented quartz sand grains (Novick 1978:433). A mica sheen is evident in a majority of samples, probably the result orthograde metamorphism. Orthoquartzite is a primary component of the nearby Black Mingo formation, which was heavily exploited during the prehistoric period (Anderson et al. 1982). This geologic formation is at or near the surface in the eastern two-thirds of Sumter County and along the western bluff edge of the Santee and Congree rivers in western Calhoun County (Pitts 1974:109, Colquhoun 1965:7).

Corroded Limestone

Geologic Name: Quartz-Cemented Quartz Arenite

Microscopic Characteristics: poorly sorted subangular to angular quartz grains; chalcedonic pore-rimming cement; microquartz matrix

The materials that are included in this category have a rough textured groundmass consisting of semimetamorphosed limestone, small-fossilized shell fragments, and slender bands of chert or jasper. The specimens in the assemblage are crumbly and can be broken by pinching in one's hand. It would appear that corroded limestone occurs together with Manchester and other fossiliferous cherts in the Black Mingo and Santee Limestone formations and was probably discarded as "cortical" material in the reduction of chert nodules. All of this material was lumped into the single type "Corroded Limestone."

Sandstone

Geologic Name: Iron-oxide-rich Siltstone

Microscopic Characteristics: very fine quartz grains; abundant iron-oxide grains

Sandstone, technically siltstone, represents cemented quartz sand particles joined to form a moderately coarsegrained stone. This material is light brown to tan. Sandstone is another naturally occurring lithic raw material in the Coastal Plain that, along with orthoguartzite, is a major component of the Black Mingo formation.

Quartzite

Geologic Name: Light to Dark Pink Quartzite

Microscopic Characteristics: interlocking undulatory quartz grains

Light to dark pink coarse-grained quartzite apparently derived from local river or terrace cobbles, was also represented in the project collection. The specimens from the study sites appear too coarse-grained to provide optimal knapping material and, as is reflected in the inventory, this material appears to have been used in the expedient manufacture of stone tools as well as for hammerstones and anvils. The presence of quartzite in the fire-cracked rock category is indicative of another use of this type of stone. Along the South Atlantic Slope, rock hearths containing quartzite cobbles are common.

Quartz

Geologic Name: White to Tan Quartzite

Microscopic Characteristics: small interlocking quartz grains, somewhat elongated and undulating extinction

While this quartz specimen is labeled a quartzite, it is a classic example of what archaeologist refer to as white quartz. Quartz normally includes rose, clear crystal, and white vein varieties. Quartz is unambiguously distributed in the Raleigh Belt of the Piedmont and occurs most commonly as veins within larger volcanic formations. It is highly probable that the quartz in the project collection represents cobble reduction from local stream terrace sources. Quartz cobbles are commonly found in basal units of Coastal Plain formations (see Colquhoun and Johnson 1968, Novick 1978:433), which may have been exposed by episodes of periodic stream downcutting.

Grey Chert-High Quality

High quality grey chert is a fine grained translucent material. The few specimens recovered by the current project may reflect color variation within bluish-white fossiliferous chert or the Brown/Grey high quality chert identified at the Mattassee Lake sites.

Rhyolite

Geologic Name: Unidentified meta-igneous rock

Microscopic Characteristics: very fine grain quartz intermixed with some coarse grain quartz crystals; very small amounts of hornblende, clinopyroxene(?) and plagioclase.

Rhyolite is a highly isotropic, dark gray, igneous material, primarily consisting of quartz (Novick 1978:427) and derives from closely associated formations in the Carolina Slate Belt. In cross-section this material type appears to be dark green or black, but weathers to a light gray to buff color. It is principally composed of cryptocrystalline quartz. Included under this raw material category is rhyolite porphyry flow banded rhyolite, which is a dark to light gray igneous rock with large, well-formed phencrysts and crystals of quartz, feldspar and plagioclase (Novick 1978:427). It also weathers to a light gray or buff color. Flow banded rhyolite is a highly isotropic, dark gray, flow-banded igneous material primarily consisting of quartz (Novick 1978:427). This material is fairly common among the northern Fall-line region of South Carolina and up into eastern piedmont of North Carolina and is a chief constituent of the Caroline Slate Belt. Pebbles and/or cobbles of this raw material category may occur along the main river channels of the Upper and middle Coastal Plain.

Tuff

Tuff is of metavolcanic origin that occurs in the piedmont of North and South Carolina. This material is distinguished from rhyolite in that it is consistently greenish-gray to gray in color and exhibits a chalky texture. It is not as fine grained as rhyolite and weathering causes the exterior to feel powdery.

RAW MATERIAL PATTERNS

Table 1 presents a breakdown of the raw material types for all prehistoric artifacts recovered at the project area sites. Quartz is the most represented material (52%) in the project collection, followed by orthoquartzite (17%), quartzite (8%), rhyolite (8%), white fossiliferous chert (4%), brown/tan fossiliferous chert (2.5%), Allendale chert (2.5%), bluish-gray fossiliferous isotropic chert (2%) and chert (general) (2%). The remaining raw material types represent 1 percent or less of the project total.

Phase III investigations conducted on sites near Big Bay have indicated quartz raw material is usually associated with the Woodland Period occupations, while rhyolite appears to be an indicator of earlier Archaic components. Orthoquartzite, a material found along the Santee River drainage, appears to have been used throughout most of prehistory and occurs in both the Woodland and Archaic components. Quartz is the most frequently represented raw material type at sites 38SU58 (37%), 38SU191 (47%), and 38SU222 (66%) and all three sites contain prehistoric ceramics indicative of Woodland and Mississippian period occupations. This most recent data suggests the use of quartz does not appear so restricted to the Woodland period at these sites. A significant proportion of the quartz recovered at each of the sites came from deposits 40 cm or more below surface, which presumably represent Archaic-age deposits. Moreover, most of the sites contain significant Mississippian components intermixed with Woodland components. Rhyolite, a usual indicator of earlier Archaic occupations at sites ringing Big Bay, is well represented in the upper Woodland and Mississippian-age deposits, although it's use is greatly diminished on the three project area sites. At the two sites from Shaw AFB 60% of the lithic material was manufactured from rhyolite and 40% was comprised of quartz. Although the Shaw AFB sites were but limited samples, two Middle Woodland diagnostic points (Yadkin Triangulars) were manufactured from rhyolite. Orthoquartzite represented approximately 17 per cent of the lithic assemblage, however, 94% of the sample was recovered from 38SU191 and is associated with a midden deposit containing Deptford and generalized Woodland plain ceramics. The remaining orthoquartzite occurred at 38SU58. Interestingly, there is no indication of orthoquartzite use at 38SU222. Overall the use of quartzite was low however, it appears to be well represented at 38SU191 where it comprises 12% of the lithic assemblage and consist almost entirely of fire-cracked-rock. Among the chert varieties, white fossiliferous

isotropic chert was the most commonly used white fossiliferous isotropic chert was the most commonly used and comprises 20% of the overall lithic assemblage at 38SU58 but only 4.5% and 1% of the lithic assemblages at 38SU191 and 38SU222, respectively.

Table 1. Raw Material Representation at Project Area Sites.

Raw Material Types	38SU5	8	38SU1	91	38SU2	22	SHAW	AFB	Grand	Total
	Count	%	Count	%	Count	%	Count	%	Count	%
Allendale Chert	2	2.5	6	0.5	23	6	0	0	31	2.5
Bluish-Gray Fossiliferous Chert	3	2.5	7	1	16	4	0	0	26	2
Brown/Tan Fossiliferous Isotropic Chert	3	4	15	2	18	5	0	0	36	2.5
Chert (unidentified)	3	4	13	1.5	7	2	0	0	23	2
Corroded Limestone	0	0	0	0	1	0.5	0	0	1	<0
High quality Gray Chert	0	0	1	0.1	1	0.5	0	0	2	<0
Orthoquartzite	8	10.5	205	24	4	1	0	0	217	17
Quartz	28	37	393	47	242	66	2	40	663	52
Quartz Crystal	6	8	1	0.1	0	0	0	0	7	0.5
Quartzite	2	2.5	101	12	5	1.5	0	0	108	8
Rhyolite	6	8	47	5.5	45	12	3	60	98	8
Tuff	0	0	11	1.5	0	0	0	0	11	1
Sandstone	1	1	2	0.2	1	0.5	0	0	4	0.5
White Fossiliferous Isotropic Chert	15	20	37	4.5	3	1	0	0	55	4
Grand Total	76	100	839	99.9	366	100	5	100	1286	100%

LITHIC FUNCTIONAL TYPES

Analytical methods employed in this analysis were designed to describe the cultural/temporal association of the sites as well as the processes involved in lithic procurement and utilization. Johnson (1989) has developed a method that characterizes lithic bifaces and debitage in terms of their position in the reduction trajectory. This method was used in this study to describe and analyze debitage as well as to sort bifaces into categories indicative of early and late stage implement manufacture. The various lithic functional types are described below. The results of the lithic analysis performed on materials collected from the five project area sites are presented as Appendices at the back of this report.

DEBITAGE

This artifact category represents the overwhelming majority of the lithic artifacts collected during the project. Debitage occurs on all of the prehistoric sites in the project area and is defined as the flakes or shatter byproducts of chipped stone tool manufacture. Artifacts placed within the debitage category were divided into five distinct classes reflecting a proposed manufacturing/reduction sequence (White, Binford, and Papworth 1963).

Shatter/Chunks and/or Cortical Chunks consists of angular shaped pieces of raw material formed as a result of angular shearing presumably during the earliest stages of the core reduction sequence. Presumably, the majority of this class of debitage is generated when unmodified raw material cobbles or slabs are initially

tested to determine the suitability of the material for further reduction and to establish an initial platform for further reduction.

Primary Flakes represent the second stage in the production of a core or biface whereby flakes are detached which retain cortex over 75 percent of its dorsal surface, tend to be larger than other classes of flakes, exhibit little or no longitudinal curvature and have platform angles approaching 90 degrees. A flake meeting these criteria was classified as a primary flake.

Secondary Flakes represent the third stage in the production process and consists of flakes that exhibit between 1 and 75 percent cortex on their dorsal surface, one or two flake scars on their dorsal surface, are generally smaller and exhibit a greater longitudinal curvature than Class 2 artifacts.

Interior Flakes are the fourth stage of the production sequence. These intermediate sized flakes have a dorsal surface that exhibits large flake scars from earlier reduction stage activities and no cortex.

Tertiary Flakes represent the fifth stage of the reduction sequence in which the final step in the formation of tool edges is undertaken. These flakes are small, less than 2 cm in length, exhibit flake scars and no cortex on their dorsal surface, and increased longitudinal curvature and more acute platform angles over what is generally observed on earlier stage flakes.

Debitage not retaining a platform or that was too fragmentary to confidently classify into one of the manufacturing stage classes was assigned to a_miscellaneous category of broken flakes called flake fragments. All broken debitage was sorted into groups according to raw material type and counted. (Table 2).

It is evident from viewing Table 2 that the lithic technology represented at the sites involves core and biface reduction as well as the maintenance and retooling of existing implements. Since raw materials for tool making do not occur on site, all materials necessary for completing these activities had to be curated into the area from a distance. Generally, this insures that most raw materials arriving at the sites would have been in existing functional form or in a developmental stage requiring little effort to become functional.

BIFACES

This category includes bifacially-worked stone tools encompassing a wide variety of shapes, sizes, and breakage conditions that do not exhibit a haft element. Previous research indicates that many of the tools included in this category likely served multiple functions that changed throughout the life history of these forms (Frison and Bradley 1980, Binford 1977, Cable 1982). For example, Binford (1979:262) refers to a specific type of bifacial tool that served several different functions in the Nunamiut tool assemblage. His informants spoke of carrying "cores" into the field. According to them, an individual carries a piece that has been worked enough so that all the waste is removed, but that has not been worked so much that one cannot do different things with it. These cores were described as shaped like discs of Six general biface fragments were identified in the inventory; 56 manufactured from quartz and four from chert. Bifaces are defined here as bihedral stone tools that have been extensively retouched on both faces (see House and Wogamon 1978:60). These were further subdivided into two substages. Substage I bifaces consist of large, often thick, asymmetrical masses of rock that exhibit minimal attempts to form a bifacial edge. Flake scars along the lateral margins are relatively large, resulting in a sinuous edge. These tools are believed to be early stage preforms or bifacial cores. In either case, since no effort was expended to create a finished marginal edge, they would be less effective as cutting implements. A single biface manufactured from quartz was included in the Substage 1 category. Substage II bifaces consist of smaller, well thinned, and often symmetrical tools exhibiting intentional edge straightening by direct percussion or pressure flaking. These tools are thought to represent late stage preforms or finished bifacial cutters and/or scrapers. Three quartz, one chert and one rhyolite biface fragments were identified as Substage II bifaces.

Table 2. Total Debitage Representation at Project Area Sites. 38SU58, 38SU191 and 38SU222

Raw Material	Cortical Chunk	Shatter/ Chunk	Primary Flake	Secondary Flake	Interior Flake	Tertiary Flake	Flake Fragment	Grand Total	Total %
Allendale Chert	0	0	0	0	3	25	2	30	3
Bluish-Gray Fossiliferous Chert	1	2	1	2	8	14	0	28	2.5
Brown/Tan Fossiliferous Isotropic Chert	0	1	3	1	1	25	4	35	3
Chert (unident)	0	1	0	0	0	13	3	17	1.5
Corroded Limestone	0	1	0	0	0	0	0	1	<0.0
Gray High Quality Chert	0	0	0	0	0	1	0	1	<0.0
Orthoquartzite	1	16	4	3	35	133	12	204	18.5
Quartz	18	46	61	95	13	337	41	611	56
Quartzite	0	0	1	1	0	0	0	2	<0
Quartz Crystal	0	1	0	0	0	7	0	8	1
Rhyolite	0	0	0	1	12	70	7	90	8.5
Sandstone	0	0	0	0	1	0	0	1	<0.0
Tuff	0	0	0	0	2	11	1	14	1
White Fossiliferous Isotropic Chert	1	6	0	0	7	35	3	52	5
Grand Total	21	74	70	103	82	671	73	1094	100
Total %	2	7	6	9.5	7.5	61	7	100	

PROJECTILE POINTS

Projectile Points are distinguished from bifaces as they are produced to have two acute working edges that join at the distal end of the implement to form a sharp point. Opposite of this sharp distal point is the proximal end, which is often prepared to facilitate hafting. This preparation may be simply the thinning or grinding the base, or the more elaborate production of a stem or some other prepared surface. This group was initially broken into broken/unidentifiable fragments, broken/identifiable fragments and whole/identifiable projectile points. Identifiable Projectile Points were assigned to commonly accepted, cultural/temporal types. Publications including Cambron and Hulse (1975), Justice (1987), Blanton et al. (1986) and Sassaman et al. (1990) were referenced in this procedure.

Twelve projectile points or projectile point fragments were collected from the project areas. Types representing Early Archaic, Late Archaic, Middle Woodland, and Late Woodland/Mississippian periods were identified in the collections.

One Taylor Side Notched point was recovered on the surface of site 38SU58. This specimen was manufactured from Allendale chert and exhibited slightly incurvate, serrated beveled blade edges. Anderson et al. (1996) indicates a terminal-Paleoindian/early-Early Archaic affiliation for this point type, which is dated between 10,500 to 9,900 B.P.

One projectile point from the collection was identified as a Small Savannah River Stemmed Stemmed. This point type consists of a medium-sized stemmed points that are smaller overall and exhibit blade forms that are more triangular than the classic Savannah River Stemmed point first described by Coe (1964) in North Carolina. As part of an overall trend that began in the latter part of the Late Archaic subperiod, larger, stemmed biface forms evolved into increasingly smaller, and often crudely executed stemmed varieties (Keel 1976; Oliver 1981, 1985). The example from this collection was recovered from 38SU250 and was manufactured from rhyolitic tuff.

One rhyolite *Nolichucky* and two rhyolite *Yadkin Triangular* projectile points were identified in the project collection. The Nolichucky point was recovered in Level 2 of a shovel test unit at site 38SU191 and the two Yadkin points were recovered from the survey investigations at Shaw AFB. One was found on the surface at 38SU250, the other from a possible Middle Woodland deposit at 38SU299. Stratigraphic data pertaining to the age of these point types in the South Carolina Coastal Plain region, suggests a Middle Woodland period affiliations (Cantley 2001:137-139).

Five small Late Woodland/ Mississippian Triangulars were identified in the project collection. These point types mark the introduction of bow and arrow technology in the Southeast after A.D. 500 (Oliver 1985: 209). Metric data on small triangular points from sites in South Carolina and Georgia has shown that variability in basal width is a viable temporal marker for delineating between Late Woodland and Mississippian forms (Blanton et al. 1986; Anderson et al. 1982; Rudolph and Hally 1986; Sassaman 1990). Two specimens from the project assemblage were manufactured from quartz, and one each from orthoquartzite and rhyolite. Obtainable basal widths range from 18.4 to 21.2 mm suggesting Late Woodland cultural affiliations.

A single artifact manufactured from white fossiliferous chert was classified as projectile point tip based on the presence of percussion or pressure flaking along the edges leading up to an acute or subrounded tip. Because this specimen is so fragmentary, it could not be assigned a cultural affiliation within any degree of certainty.

OTHER BIFACIAL TOOLS

This category consists of finished bifacial tool forms, which exhibit specialized morphology and edge treatments. Five artifacts from the survey collection were assigned to this broad category including one drill, one pièces esquillée, and three bifacial perforator/engravers. *Drills* consist of narrow, symmetrically-shaped bifaces with use-wear on their tips, which indicate a circular drilling motion. One complete drill fragment made of rhyolite was identified in the collection. One quartz *pièces esquillée* or wedge was identified. In general these tools are flakes, expended bipolar cores, and/or projectile point fragments with evidence of crushing on both ends, the result of bipolar reduction. These tools would have been used for scraping and planning or used as wedges for slotting. Bifacial *perforator/engravers* are biface fragments that have been retouched in order to isolate a triangular projection or spur. These tools are used to incise, form or perforate organic material or soft stone. Two quartz specimens were recovered from 38SU191 and a single chert specimen was recovered from 38SU222.

UNIFACES

Unifaces or scrapers are intentionally reworked flakes that are usually made on relatively early stage or blade-like flakes. Reworking is accomplished by the removal of small pressure flakes along the tool margin. Often times the reworked edge is unifacial, but in some instances bifacial reworking may be present. Five distal edge unifaces or endscrapers were identified in the lithic assemblage. All five specimens were recovered from 38SU191. Three unifaces were manufactured from chert and two from orthoquartzite. One endscraper was found on the surface, while remaining specimens were recovered from deeply buried deposits in either during test unit and shovel test excavation.

EXPEDIENT FLAKE TOOLS

Flake tools are defined as lithic flakes with evidence for use in the form of use-wear or edge modification (other than trampling or other forms of unintentional crushing/damage). This category includes minimally retouched and unretouched stone tools that retain much of the morphology of the original flake or flake blank from which they were made. Flake tools were distinguished from formal tools based on the presence of flake attributes. If a tool could be recognized as a complete or split flake, or proximal, medial-distal, or non-orientable flake

fragment it was called a flake tool. Expedient flake tool categories include utilized flakes, retouched flakes, and blades.

Utilized Flakes

This category includes any flake with small flake scars, rounding, polish, and/or striations along one margin attributable to tool use. Three utilized flakes were identified one of each made from orthoquartzite, quartz, and rhyolite.

Blades

Blades (i.e. prismatic blades) are traditionally defined as elongated flakes systematically produced from a prepared core. However, this category is also extended to bifacial thinning flakes with at least a 2:1 length to width ratio exhibiting flake removal scars on the dorsal surface parallel to the long axis. The single flake blade manufactured from orthoquartzite was identified in the lithic collection. This specimen represents a true prismatic blade. Rounding and polish use-wear was noted along one lateral margin. This specimen was recovered from the Deptford midden context at 38SU191.

Retouched Flakes

This tool category includes any flake with deliberate retouch scars along at least one margin. A bifacially retouched flake is any flake with invasive bifacial retouch along one margin. Retouch scars may be the result of percussion or pressure flaking removals, but not trampling-related flake removals. Two retouched flakes were identified from the artifact assemblage. Both were manufactured from quartz. One specimen in particular appears to be a composite flake tool as it exhibits bilateral notching (presumably for hafting) and a unifacially worked distal edge.

CORES

Cores are a direct link between the two acts of lithic procurement and utilization. Physical attributes that evidence core curation and modes of utilization are an important indicator of lithic economy and technology. Six different types of cores were noted in the collection (Crabtree 1972; Binford and Quimby 1963). Bidirectional or bifacially-worked, amorphous cores were identified by the removal of large flakes from opposite surfaces of the core. These cores have large flake scars on opposite sides producing a rough biface that can be distinguished from a blank or preform by the absence of fine flaking intended to shape the implement. The second type of core was the unidirectional or split core. This type of core is "turtle-backed" in that it has a domed topside and a base that is often flat. Flakes are removed from the sides of the core while the flat bottom is supported on an anvil or the ground. This procedure sometimes results in thoroughly utilized unidirectional cores being taller than they are wide. Another feature that distinguishes this type of core is the presence of multiple hinge flake scars all around the outside edge of the artifact. The third core type is the multi-directional core. Multi-directional cores exhibit evidence of flake removals in three or more directions. Three multi-directional cores manufactured from quartz were recognized. One was recovered from 38SU191, the other two from 38SU222. The fourth core type was a polyhedral or cylindrical core that exhibited bladelike flake scars. A single exhausted polyhedral core with flake blade scars was found at site 38SU222. This specimen was manufactured from chert. The fifth core type was the bi-polar core. These small cores are bullet-shaped with a domed top. The top of the cores served as the primary percussion reception area as evidenced by the extreme battering and step fracturing on its surface. The opposite end of the core is generally flat and served as the surface for balancing the artifact on the anvil. The sixth and final core type recognized in the collection was a general category of informal or amorphous cores. These cores are usually blocky or irregularly-shaped and do not conform to established types. They generally exhibit several flake removal scars with one or more striking platforms. All six informal cores identified in the collection were small, broken, and/or appear to have been exhausted.

PITTED ANVILSTONE

A single pitted anvilstone fragment was recovered from 38SU222. The specimen consists of a small rounded cobble with battering and crushing use-wear that has left a distinct rounded impression in the center of the cobble. It is believed to be the result of lithic tool production and/or food processing activities. The anvilstone from the collection is associated with a deeply buried Early Archaic deposit.

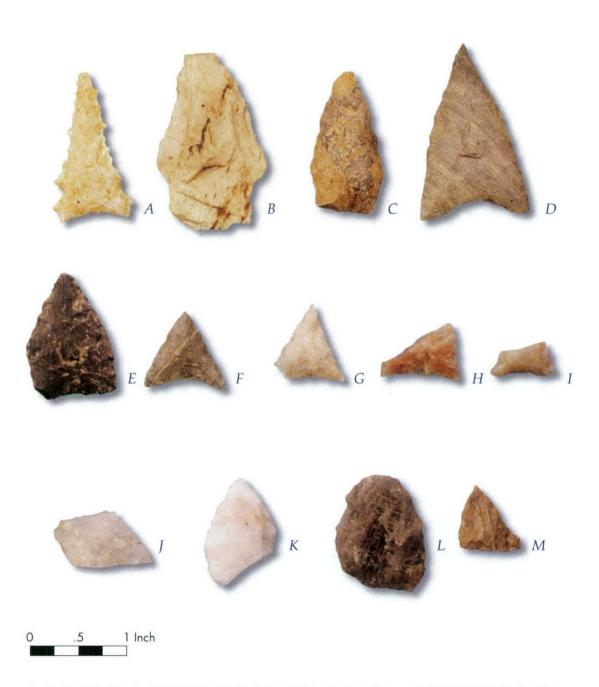
CERAMIC ANALYSIS

This chapter presents the descriptive results of the prehistoric ceramic analysis for Phase II testing of three archaeological sites (38SU58, 38SU191, and 38SU222) on the Poinsett Electronic Combat Range, Sumter County, South Carolina. Eight hundred fifty-seven ceramic items were collected as a result of the investigation (Table 3), which includes a small number from two previously unrecorded sites (Field Site 1 and Field Site 2) situated outside of the established boundaries of the target sites. Ceramic series and types representing terminal Late Archaic, Woodland, and Mississippian phases were identified in the collections. The typological classification of sherds used in this study follows the system developed by Cable (Cable and Cantley 1998) for the Poinsett region and the raw data generated from the analysis are contained in the Appendices.

Table 3. Distribution of Ceramic Series by Site.

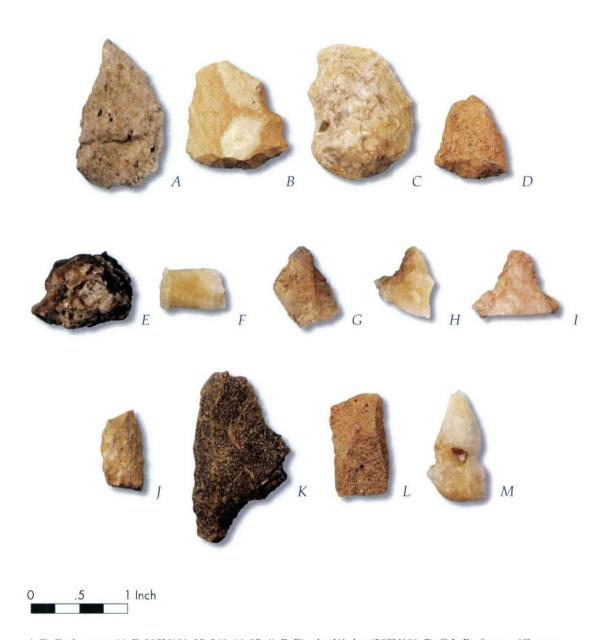
Series	38SU191	38SU222	38SU58	Field Site 1	Field Site 2	Grand Total
Thom's Creek 1	1		5			6
Thom's Creek 2		2				2
Refuge 1.1	1					
Refuge 1.2	1		1			2
Refuge 2.1	1					1
Refuge 2.2	1					1
Woodland 1	22	33	10			65
Woodland 2	146	56	47	1		250
Woodland Fp			1			1
Deptford 1	20	21	4			45
Deptford 1a		3				3
Deptford 2	17	30	19		4	70
Deptford 2.2	1					1
Berkeley		2				2
Cape Fear 1	25	11				36
Cape Fear 2	24	29				53
Santee 1	3	17				20
Santee 2	16	31	1		2	50
Pee Dee 1	15	31				46
Pee Dee 2	17	19	1			37
Pee Dee Fp	1	5				6
Unidentified		1				1
Sherdlets	77	64	17			158
Grand Total	389	355	106		6	857

Figure 3 Bifaces and Projectile Points



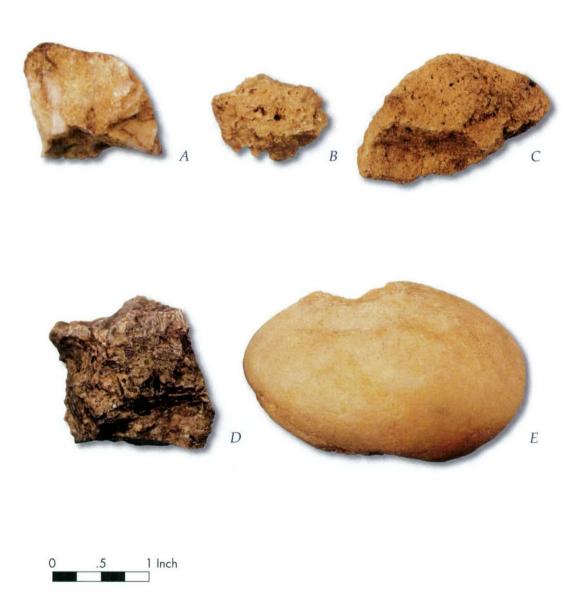
A. Taylor Side Notched (38SU222, 15), B. Sykes/White Springs Stemmed (38SU250, 3), C. Bradley Spike (38SU191, 137), D-E. Yadkin Triangular (D: 38SU250, 1; E: 38SU299, 1), F-G. Late Woodland/Mississippian Triangular (F: 38SU58, 1; G: 38SU222, 158; H-I: 38SU191, 5), J-M. General Bifaces (J: 38SU222, 3; K: 38SU222, 35; L: 38SU191, 79; M: 38SU191, 120).

Figure 4 Formal and Expedient Tools



A-E. Endscraper (A-E: 38SU191, 35, 260, 44, 95, 4), F. Bipolar Wedge (38SU191, 5), G-J. Perforator/Graver (G-H: 38SU191, 109, 7; I: 38SU222, 37; J: Drill 38SU191, 98), K. Utilized Flake (38SU222, 155), L. Utilized Blade (38SU191, 130), M. Hafted Flake Scraper/Perforator (38SU191, 62).

Figure 5 Cores and Miscellaneous Lithic Tools



A. Quartz Core Fragment (38SU191, 56), B. Chert Core Fragment (38SU191, 131), C. Orthoquartzite Core Fragment (38SU191, 219) D. Exhausted Chert Core (38SU222, 44), E. Pitted Quartz Anvil Stone (38SU222, 57).

METHODOLOGY

In addition to culture historic type, other information was recorded for each ceramic item in the collection. Included in the attribute analysis were the variables "ceramic form", "wall thickness", "size class", and various rim morphology characteristics. Ceramic form identified the specific portion of a vessel or other ceramic object represented by a particular item. Six forms were recognized, body sherds from vessels (n=634), rim sherds from vessels (n=48), neck sherds from vessels (n=7), vessel base sherds (n=5), Tetrapodal leg supports (n=1) and "sherdlets" (n=162). "Sherdlets" represent small, eroded and spalled sherds that have little or no diagnostic value and are generally smaller than 1 to 2 cm in diameter. Wall thickness was measured in 0.5 mm increments using sliding calipers. Only those specimens that had in tact interior and exterior surfaces facilitating a complete measurement of the attribute were measured. Rim thickness was consistently measured at a point 10 cm below the lip. Mean sherd body thickness for the entire collection is 7.26 ± 1.60 mm (n=593). Size Class was measured using a nested grid of squares of the following sizes:

Class 1: $< 1 \text{ cm}^2$ Class 2: $1 \text{ cm}^2 < 2.25 \text{ cm}^2$ Class 3: 2.25 < 4 cm² Class 4: $4 \text{ cm}^2 < 9 \text{ cm}^2$ Class 5: $9 \text{ cm}^2 < 16 \text{ cm}^2$ Class 6: $16 \text{ cm}^2 < 25 \text{ cm}^2$ Class 7: $25 \text{ cm}^2 < 36 \text{ cm}^2$ Class 8: $36 \text{ cm}^2 < 49 \text{ cm}^2$ Class 9: $49 \text{ cm}^2 < 64 \text{ cm}^2$ Class 10: $64 \text{ cm}^2 < 81 \text{ cm}^2$ Class 11: $81 \text{ cm}^2 < 100 \text{ cm}^2$ Class 12: $100 \text{ cm}^2 < 121 \text{ cm}^2$ Class 13: $121 \text{ cm}^2 < 144 \text{ cm}^2$

Most of the sherds (size class for sherdlets was not recorded), fall between 1 and 16 cm² in area, or size classes 2 through 5 (Table 4). Very little difference is noted between the size profiles of the various sites, which fall within the normal range for sites in the Poinsett region.

Table 4. Distribution of Sherd Size Class by Site.

	Sherd Size Class								
Site	1	2	3	4	5	6	7	9	Grand Total
38SU191	10	144	102	42	7		2		307
38SU222		122	115	34	11	6	1	2	291
38SU58	5	45	27	7	5				89
Field Site 1			1						
Field Site 2		2	2	2					6
Grand Total	15	313	247	85	23	6	3	2	694

Finally, four variables were recorded to characterize aspects of rim morphology. These were: 1) Rim Type, 2) Lip Form, 3) Lip/Neck Orientation, and 4) Lip Decoration. Rim Type describes the construction of the rim. Four rim types were identified. Most of the rims (n=35) in the collection were plain. Minority types included rolled (n=3), notched (n=3), strip appliqué (n=3), folded (n=1), hollow reed punctates incidental to the rim (n=1), and square punctuates incidental to the rim (n=1). Six lip shape groupings were identified, including

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rounded (n=5), sub-rounded (n=5), flattened (n=17), tapered (n=14), truncated (n=3), and beveled (n=2). Two lips could not be classified due to poor condition. Neck orientation describes the angle at which a neck diverges from the body of a vessel. Five orientations were identified in the rim sample. Straight or direct orientations were the most numerous (n=19). These orientations represent vessels with straight sides or very slightly incurved bowls. Recurved rims (n=3) represent long-necked jars with slightly constricted orifices. Sixteen flared rims were identified. This orientation occurs on deep bowls and wide-mouth jars with slightly flaring orifices. Incurved orientations, of which 8 were identified in the collection, represent closed moth bowls and jars with constricted orifices. Finally one out-curved orientation was identified. Out-curved orientations are found on small, constricted mouthed jars. Ten lips in the collection were decorated. Four of these exhibited simple stamped impressions, one contained a continuation of the complicated stamped design from the exterior surface, and one showed a continuation of check stamping. Notching with a dowel stylus applied transverse to the rim occurred on three specimens and an incised rim line following the curve of the rim occurred on one rim.

CERAMIC SEQUENCE

Cable (Cable and Cantley 1998) has proposed a prehistoric ceramic phase sequence for the Lower Wateree River Valley (Figure 6). It should be stressed that the sequence is provisional, no more and no less, and is composed of a series of hypotheses concerning ceramic phase structures based on our meager understanding of the ceramic inventory of the region and correlations with closely affiliated regional sequences. It is fully anticipated that modifications and revisions will be made in the future as contextual associations are discovered and absolute dates are obtained. Phase nomenclature follows closely the systems developed by DePratter (1979) and Anderson (1982). This is a generic system that attempts to maintain regional linkages.

The earliest ceramic types in the project area tend to parallel very closely those described for Mattassee Lake (Anderson 1982) and the Lower Little Pee Dee (Cable 1998a). The basal understratum consists of fiber-tempered plain pottery that is identifiable as Stalling's Plain. The paste is relatively coarse and hard on the few examples recovered from the Poinsett region sites, which suggests that this material can be correlated with Sassaman's (1991:118-119) Group III Late Archaic ceramic assemblages. Group III assemblages date to the interval 3500 to 3200 BP. The initial Thom's Creek occupation of the region correlates with Cable's (1995) Horse Island assemblage of the South Carolina coast, which in its full expression appears to span the period 3700-3200 BP. These assemblages are dominated by reed separate and drag-and-jab punctated types. Owing to the presence of relatively late Stallings Group III occupations in the region, it is inferred that the temporal span of this assemblage is compressed and that it appeared no earlier than about 3400 BP here. The associated ceramic phase is provisionally correlated with Thom's Creek I of the Mattassee Lake sequence. The succeeding Awendaw assemblage (Cable 1995), which is comprised primarily of plain and finger pinched types, was also identified in the Poinsett region sites and this assemblage correlates with Thom's Creek II of the Mattassee Lake sequence. This is considered to be a relatively short-lived phase spanning the period from 3200 to 3000 BP.

Refuge occupation in the Poinsett region appears to follow the structure of the Minim Island assemblage as described by Cable (1995). Simple stamped assemblages like those that characterize the mouth-of-the-Savannah expression of Refuge do not appear to be present. Instead assemblages dominated by dentate stamped and plain surface treatments have been identified which would correlate with the later end of Refuge, the Refuge II phase of the Mattassee Lake sequence. As of yet an incised assemblage that can be correlated with Refuge I has not been identified in the Poinsett region, but it is never the less included in the sequence at the present time.

Horizontal stratigraphy delimited by data recovery excavations and additional site testing in the Poinsett region indicates the presence of a nearly pure Deptford Check and Linear Check Stamped assemblage that can be correlated with Deptford I of the Mattassee Lake sequence. There is some indication that Deptford I

assemblages in the lower Wateree River valley may contain higher percentages of simple stamping, however. This inference is based on the relatively high percentages of Deptford Simple Stamped in the Poinsett region mitigation inventory and the comparable results reported by Blanton et al. (1986:69, see Yadkin Simple Stamped). A corrected radiocarbon date of 2410 ± 130 r.c.y. BP was obtained from a pit containing check stamped and simple stamped sherds at 38SU83 (Blanton et al. 1986:147), which is well within the estimated range of 2600 to 2200 BP for Deptford I.

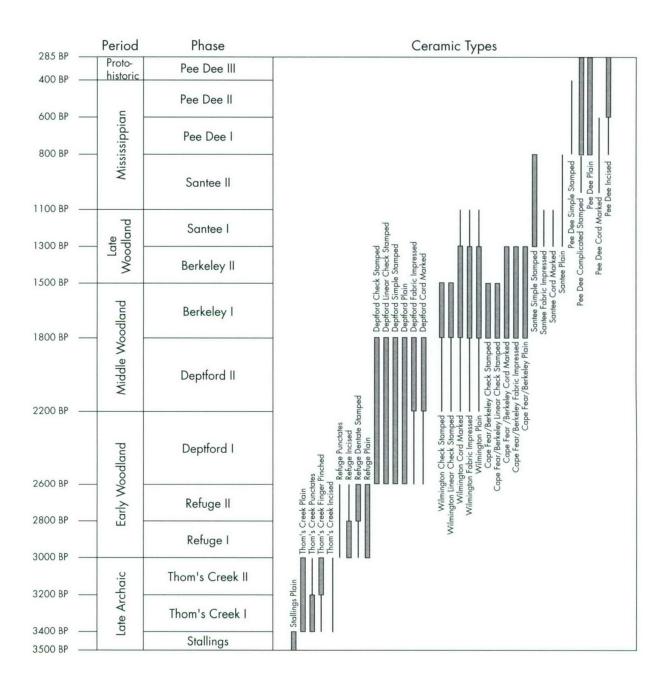
Deptford II assemblages are defined by the addition of Deptford Cord Marked and Fabric Impressed in the region. By this time in North Carolina these two surface treatments occur in relatively equal proportions in Deep Creek II/III and New River II assemblages (Phelps 1983) and we can infer a similar relationship in the lower Wateree River valley. This constitutes a contrast with the Mattassee Lake sequence, where Deptford Cord Marked never attains a significant proportional contribution. A corrected radiocarbon date of 2170 ± 120 r.c.y. BP was obtained from a cached "Yadkin" Cord Marked partial vessel at 38SU83 (Blanton et al. 1986:146), which would correspond to the earlier half of the estimated date range of Deptford II (2200-1800 BP). Small amounts of grog/sherd-tempered ceramics may also be present in Deptford II assemblages, but they would not be diagnostic of the phase.

Nomenclature for the succeeding phase departs from the Mattassee Lake sequence. There a Deptford III phase is identified which is characterized by the significant presence of three ceramic series, Cape Fear, Berkeley and Wilmington. This is clearly something different than Deptford. By the same token, it is not Wilmington I as defined by DePratter (1979, 1991). Wilmington I is a pure grog/sherd-tempered assemblage that is estimated to begin about 1500 BP. Here, we are considering a phase that may have begun as early as 1800 BP and which includes a combination of grog/sherd- and finer sand-tempered ceramics. This mixture of temper types suggests a tie to the North Carolina sequences, but the temporal range is earlier. Moreover, there appears to be a greater proportion of check stamped in the Poinsett region assemblages than either the North Carolina or Georgia sequences, which provides some support for its early temporal placement. Given its unique and probable earlier point of origin, it is suggested that a unique name be applied to this phase. The phase nomenclature selected here is Berkeley to describe the temporal span in which these three series dominate assemblages. Two phases can be distinguished. Berkeley I is identified by the significant, although not dominant, presence of check stamped and linear check stamped types associated with each series. Cord marked and fabric impressed types, however, dominate the assemblages. Berkeley II correlates temporally with the Mount Pleasant/Cape Fear phases of North Carolina and Wilmington I of Georgia. Check and linear check stamped types are no longer present and there may be a trend toward higher proportions of fabric impressed surface treatments. Berkeley I and II cover the period from 1800 to 1300 BP.

Very little evidence has been found in the Poinsett region for a Late Woodland/early Mississippian series similar to the Santee series described for the Mattassee Lake sequence. Stuart's (1975) description of the Camden Series from further up the Wateree River implies that such an assemblage is no doubt present in the larger region, however. Tentative Santee I and Santee II phases have been placed in the provisional sequence to fill in this gap. However, 38SU191 and 38SU222 appear to contain Santee assemblages that may provide a basis for defining these phases with continued investigations.

Finally, the Pee Dee series defined for the Poinsett region reflects Mississippian assemblages dominated by complicated stamped and plain types. The sample recovered during the current project appears to date to both the Pee Dee I and Pee Dee II phases. Pee Dee I assemblages are characterized by plain, notched and punctuated rims, as well as incidental punctuations, nodes, and rosettes. The Pee Dee II phase or phase group is not well defined for the Poinsett region, but an apparent assemblage associated with this cultural period has been identified at 38SU191 as a consequence of this project. This assemblage is characterized by plain, appliqué strip, and folded rims and correlates with the Lamar phases of the Wateree Valley sequence (see Cable et al. 2000; DePratter and Judge 1986).

Figure 6 Provisonal Lower Wateree Ceramic Sequence



SERIES AND TYPE DESCRIPTIONS

In this section the ceramic collection will be described and illustrated. Individual culture historic types are presented within the series format as is the custom throughout the Southeast Atlantic Slope. Physical and morphological variation within series and types are discussed in the context of the variables recorded in the analysis. In general, the series configuration of the collection reflects a similar composition to that described for various nearby regions. Closest affinities would appear to be drawn with the Mattassee Lake sequence (Anderson 1982) of the Lower Santee River valley, but the incompletely described sequences of the Upper Wateree River Valley (Stuart 1975) and the sandhills of central South Carolina (Blanton et al. 1986) are probably closest in overall structure. The provisional sequence for the lower Wateree River Valley discussed above will frame the discussion. Series will be presented in inferred chronological order from earliest to latest.

THOM'S CREEK

Descriptions of Thom's Creek types were initiated with Griffin's (1945) treatment of sand-tempered ceramics containing the same basic punctated designs as found on Stallings series material. Formal descriptions of types associated with the series and types of affiliated series (i.e. Awendaw) have been generated by Anderson (1982), Phelps (1968) Trinkley (1980a,b) and Waddell (1971). Thom's Creek ceramics date to the interval 3700 to 3000 BP on the South Carolina coast. The type probably entered the central and northern coastal plain of South Carolina during the later part of this range (Cable 1998b), at around 3500 or 3400 BP. The earliest types may have been contemporaneous with Stallings series material.

Two distinctive paste variants of Thom's Creek series ceramics have been recognized in the Poinsett region. Variant 1, or Thom's Creek 1, consists predominantly of soft, friable pastes with sparse fine-to-medium background sands. Variant 2, or Thom's Creek 2, contains predominantly soft, friable to compact pastes with abundant medium and medium-coarse background sands. Only 8 Thom's Creek series sherds were recovered from test excavations (Table 5). All three sites in the testing package appear to have minor Thom's Creek occupations based on these results.

T 11 C	TI 1	0 1	·	-	1 0
Table 5.	Ihom's	s Creek	Ceramic	lypes	by Site.

Series Variant	Туре	38SU58	38SU191	38SU222	Grand Total
Thom's Creek 1					电阻 并包括
	Reed Drag-and-Jab	1			
	Plain	1	1		2
	Indeterminate	3			3
Thom's Creek 2					
	Reed Separate Punctate			1	1
	Random Incised			1	
Grand Total		5		2	92

Thom's Creek Reed Drag-and-Jab Punctate was differentiated as a type by Trinkley (1980a:15), from Griffin's (1945:467) more inclusive type Thom's Creek Punctate. Design fields were made by repeatedly jabbing and dragging a stylus along a linear path creating overlapping punctated impressions. When narrow styli were used decorations resembling incised lines were produced. The punctuations from the single specimen recovered from project were made from a semicircular solid reed dowel (Figure 7: A).

Thom's Creek Reed Separate Punctate was named by Trinkley (1980a: 14-15) to distinguish punctations applied individually with a reed stylus from the more inclusive type, Thom's Creek Punctate, defined earlier by

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Griffin (1945:467). Generally, individual punctations were applied in linear fields around a vessel. The single example from this project contains punctuations made with a semicircular hollow reed stylus (Figure 7: B). Cylindrical (including semicircular or semi-cylindrical) styli are common to Sassaman's (1991) Phase I and II Stallings and Thom's Creek assemblages.

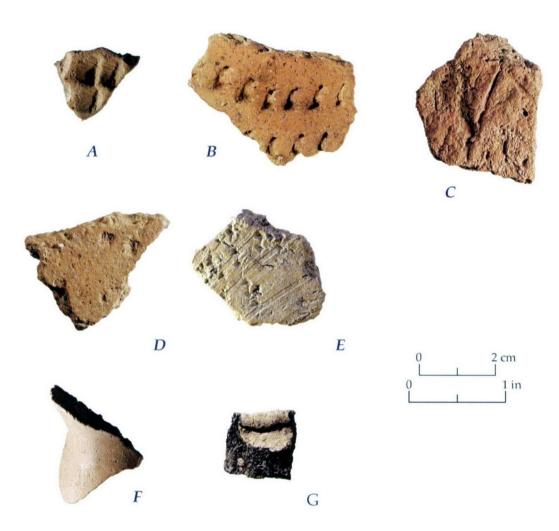
Random incised was first defined as a surface treatment type by Espenshade (Espenshade and Brockington 1979) from material recovered in the sub-midden sands at Minim Island. The bulk of the Minim Island sample appears to be affiliated with the Thom's Creek series and subsequent investigations in the Francis Marion National Forest (Cable 2002a) and in the Poinsett region (Cable 1999; Cable et al. 1998; Cable 2002b) have confirmed this. Thom's Creek Random Incised consists of shallow and narrow incisions applied in an irregular pattern (see Figure C-2: C). A closely related type, Thom's Creek Incised, exhibits regularly spaced parallel and hachured line systems. Examination of partial vessel assemblages indicates that both random and regular design systems can be viewed on single vessels (Cable 2002a). Consequently, it is best to appreciate that these two type descriptions are only sherd types and do not necessarily distinguish separate decorative motifs.

Punctated types tend to correlate with the Horse Island Phase on the South Carolina Coast (Cable 1995), which would suggest a date of origin of around 3500 BP. The absence of shell point punctate distinguishes this material from the coastal tradition and more closely aligns it with interior sites such as Stallings Island. Similar results were obtained from the analysis of Thom's Creek punctated design elements in several earlier studies at Poinsett Range (Cable 1998b, 1999, Cantley and Cable 2002b). Incised types, by contrast, appear to be affiliated mot commonly with the terminal phase of the Thom's Creek period, which has been recently identified as the Wambaw phase (Cable 2002a). This phase is projected to date to the time period between about 3100 and 2900 BP.

REFUGE

Refuge pottery was first defined by Antonio Waring (Williams 1968:198-208) at the Refuge Site located in the Savannah National Wildlife Refuge. Waring found it difficult to distinguish this material from the overlying Deptford sherds on the basis of paste, which was uniformly coarse and sandy. However, the sherds he recognized as Refuge were situated at a lower depth in the site matrix and exhibited punctated and incised designs similar to those noted for Stallings and Thom's Creek pottery. Anderson (1982:265) has persuasively argued that many of the original Refuge types can be equated with Thom's Creek, which occupies a pre-Deptford time interval but is older than Refuge. Some of the original Refuge decorative types, however, are distinctive (i.e. dentate stamped, irregular punctate, and an irregular round punctate) and Anderson argued further that these examples should be distinguished as true Refuge types that succeed Thom's Creek in the mouth-of-the-Savannah sequence. Thus, it was his recommendation that DePratter's (1979:120-121) Refuge I, which consisted of plain, incised, punctated, and simple stamped be renamed Thom's Creek, while Refuge II, which is distinguished by the presence of dentate stamped and also probably irregular punctates, should solely represent the Refuge phase. This study will follow Anderson's recommendations, although it is important to appreciate that design style change probably occurred continuously between Thom's Creek and Refuge and that some Refuge designs may have been partially contemporaneous with Thom's Creek designs. As the author has pointed out elsewhere (Cable 1998a), monitoring changes in paste characteristics might allow us to answer this question as there is a distinctive shift toward harder and coarser pastes in Refuge. The accepted age range for Refuge pottery in nearby regions is 3100 or 3000 to 2600 BP (see Anderson 1982:250; DePratter 1991:9).

Figure 7 Thom's Creek, Refuge, and Woodland Series



Thom's Creek, Refuge, and Woodland Series. A. Thom's Creek 1 Drag-and-Jab Punctate (38SU58, 22-1), B. Thom's Creek 2 Reed Separate Punctate (38SU222, 155-1), C. Thom's Creek 2 Random Incised (38SU222, 101-3), D. Refuge 2.2 Dentate Stamped (38SU191, 233-1), E. Refuge Incised/Punctate (38SU191, 153-1), F. Woodland Fine Paste Plain, Tetrapodal Support Leg (38SU58, 28-1), G. Woodland 2 Plain, Rolled Rim (38SU191, 36-3).

Refuge series ceramics have only sporadically been encountered in the central and northern coastal plain of South Carolina. The Poinsett region, in fact, is credited with one of the largest collections of Refuge series ceramics from a single location in the entire state. Data recovery at sites 38SU136/137 and 38SU141 succeeded in recovering 99 Refuge sherds while an additional 139 were recovered from the 20 sites testing project (see Cable 1999 and 2002b). Membership in the series was determined on the basis of diagnostic surface treatment and secondarily on paste characteristics.

Five separate paste variants of the Refuge series have been identified in the Poinsett region. These include:

Refuge Variant 1.1 consisted of a paste of compact hardness with abundant medium-coarse sand inclusions.

Refuge Variant 1.2 consisted of a hard, fine paste containing variable amounts of medium to pebble-sized sand.

Refuge Variant 2 included all examples with grog/sherd temper that were characterized by a hard, fine paste with only sparse sand inclusions.

Refuge Variant 2.1 corresponded to all examples with grog/sherd temper that were also characterized by a compact paste with medium-coarse sand inclusions.

Refuge Variant 2.2 consisted of all examples with grog/sherd temper that were also characterized by a hard, fine paste containing abundant medium to pebble sized sand.

Four Refuge series ceramics were identified in the testing collection. Three exhibited dentate stamped exterior treatments and were recovered from 38SU191 (Table 6). Each represents a different paste variant, two of which contained grog/sherd (Variants 2.1 and 2.2) while the other was characterized by a medium-to-coarse sand temper (Variant 1.1). The remaining specimen of Refuge Random Incised (Variant 1.2) was recovered from 38SU58.

Table 6. Refuge Ceramic Types by Site.

Series Variant	Туре	38SU58	38SU191	Grand Total
Refuge 1.1				
	Dentate Stamped		1	的最高 上 ,不是
Refuge 1.2				西外华岛市
	Random Incised	1		BEAL SE
	Incised/Punctate		1	
Refuge 2.1				gene Walley
	Dentate Stamped		1	
Refuge 2.2				BIAN COLUMN
	Dentate Stamped		1	医单耳 10
Grand Total			4	5

Waring (Williams 1968:200) originally defined Refuge Dentate Stamped as an outgrowth of his excavations at the Refuge site on the north branch of the Savannah River. Some of the material Waring described appears to correspond more closely to modern descriptions of Thom's Creek Drag-and-Jab Punctate. As the type definition has evolved over the years, however, Refuge Dentate Stamped has come to include only the linear arrays of small stamped impressions applied at random or haphazardly across a vessel body (see Anderson 1982:264-266; DePratter 1991:166-167). The regularity of the small, primarily rectangular, impressions suggested to Waring that the designs were applied with a cog wheel or rocker stamp. The sample from the current collection exhibited rectangular and squarish (Figure 7: D) impressions.

Refuge Random Incised differs from Thom's Creek Random Incised only on the basis of paste. The former contains a much harder paste identical to that found in the succeeding Deptford Series. This type may be confused with Refuge Simple Stamped on small sherds. In addition, a single incised specimen, Refuge 1.2 Incised/Punctate, exhibited a series of shallow punctuations scattered haphazardly across the exterior face (Figure 7: E). The punctuations appear to have been applied with the end of a bi-lobed stylus similar to ones

used on some Thom's Creek series material. However, the sherd was classified as Refuge based on paste characteristics. The paste was much harder than that of the Thom's Creek series.

It is hypothesized that dentate stamping increases proportionally through the Refuge period, while incising decreases (see Cable 1995). Based on the meager sample of Refuge series material recovered during the project, it would appear that the occupation at 38SU191 contains both late and early Refuge components (Refuge II), while that at 38SU58 may be associated primarily with the early part, Refuge I or Minim Island phase.

WOODLAND

A large portion of the sand-tempered sherds could not be confidently assigned to a single series. This grouping consisted of plain and indeterminate sherds with fairly coarse and hard pastes that appear to be associated with Woodland and Mississippian period occupations. Anderson (1982:287-292) created a similar category to classify Woodland period sand-tempered plain ware in the Mattassee Lake collection in response to the difficulties he experienced in attempting to assign large portions of the plain ware assemblage to specific series. Independent evidence from vessel associations confirms that large portions of the Woodland 1 and 2 samples are affiliated with the Deptford series (see Cable 2002b).

Four paste variants have been identified previously in the Poinsett region. Two of these, Woodland 1 and 2, were described by Cable (1999), while the remaining two, Woodland 1.2 and 2.2, were later described in the data recovery report of sites 38SU136/137 and 38SU141 (Cable 2002b). These latter groupings are distinguished by the presence of sherd/grog temper inclusions. The Woodland 1 variant consists of a gritty, compact paste with an abundance of medium-coarse sand inclusions. The Woodland 2 variant represents a harder ceramic with a predominance of coarse to pebble sized inclusions contained within fine background clay. Generally, over 50 percent of the sherd body is clay, while the proportion of clay in the Woodland 1 sample is much lower, ranging between 20 and 30 percent. Woodland 1.2 and 2.2 variants resemble the Woodland 1 and 2 samples respectively, with the addition of grog/sherd temper.

Only the Woodland 1 and 2 variants were recognized in the current collection (Table 7). However, a newly defined variant (Woodland fp) was also found. It consisted of a fine paste with very sparse medium quartz sand inclusions. Only a single item, a tetrapodal leg fragment (Figure 7: e), was attributed to the fine paste variant. Tetrapodal legs are generally affiliated with Middle Woodland assemblages across the Southeast (see Caldwell 1952). If the item is affiliated with the Middle Woodland period, then the unusually refined paste would suggest some non-utilitarian function for the vessel it came from.

Woodland 2 types and categories dominated, constituting 79 percent of the Woodland series grouping. Mean wall thickness for the plain types of Woodland 1 and 2 variants was almost identical. The Woodland 1 Plain sample had a mean of 7.45 ± 1.46 mm (n=19), while the Woodland 2 sample yielded a mean of 7.57 ± 1.48 mm (n=113). Both means is within the range of variability expressed in the comprehensive sample of the Woodland variant plain types in the Poinsett region (Cable 2002b).

Fifteen rim sherds were recognized in the Woodland group material. Rim types represented include plain (n=13) and rolled (n=2). Rolled rims are constructed by a slight rolling over of the lip to create a thickening at the top of the lip (see Figure 7: f). They are typical of Middle to Late Woodland and early Mississippian

assemblages in north Georgia. Table 8 presents the distribution of lip shape by neck orientation. The collection is relatively evenly divided between direct and flared orientations. The former tend to represent hemispherical and semi-hemispherical deep bowls and jars with flattened lips and the former tend to represent open-mouthed conoidal jars with tapered lips.

Table 7. Woodland grouping types and categories by site.

Group Variant	Ceramic Type	38SU58	38SU191	38SU222	Field Site	1 Grand Total
Woodland 1						
	Indeterminate	4	13	16		33
	Indet Decorated		3	10		13
	Plain	6	6	7		19
Woodland 2						
	Indeterminate	10	24	18		52
	Indet Decorated		2	16		18
	Indet Stamped		3	13		16
	Plain	37	111	8	1	158
Woodland fp						
	Plain	1				1
Grand Total		58	163	88		310

Table 8. Lip Shape by Neck Orientation, Woodland Grouping Rims.

	Orientation									
Lip Shape	Out-curved	Flared	Slightly Flared	Slightly Incurved	Straight/ Direct	Grand Total				
Flattened			1		7	8				
Indet.		1				1				
Subrounded		1				1				
Tapered				1		9.61				
Tapered Flattened		2	2			4				
Tapered Rounded	1					1				
Grand Total		4	3	落 图 1	7	16				

DEPTFORD

The types Deptford Linear Check Stamped and Deptford Simple Stamped represent the primary diagnostics of the Deptford series in southern coastal South Carolina and adjacent Georgia. These types were defined from excavations at the Deptford Site shell midden in Chatham County, Georgia by Caldwell and Waring (1939). Deptford types were stratigraphically situated between the Stallings and Wilmington series, the latter a sand and sherd/grog tempered series comprised primarily of cord marked and fabric impressed exterior surface treatments. Waring and Holder (Williams 1968:135-151) later found it useful to distinguish several design style variations in Deptford Linear Check Stamped including linear check stamped (bold longitudinal bands separated by finer, shallower horizontal bands affecting the look of railroad tracks), bold check stamped

(primarily square, wide, deep bands of uniform size on single vessels), check stamped (square, narrow banded checks), and geometric stamped (primarily diamond- and triangle- shaped checks). Most of the designs commonly associated with Deptford were made by the application of carved paddle stamps, although rare zoned punctated and incised forms are found primarily along the Savannah River that are identified as Brewton Hill Zoned Punctate. Waring and Holder (Williams 1968:135) described pottery of the Deptford complex or series as consisting of a "heavy admixture of sand-tempering," exhibiting a light buff to orange coloration, containing relatively thick vessel walls, and having "gritty cement-like texture" on interior surfaces. The accepted age range of Deptford series ceramics is 2600 to 1500 BP (see Anderson 1982:250; DePratter 1991:9).

Deptford sherds in the collection numbered 121 (Table 9). Three paste variants were recognized which are widespread in the Poinsett region. Deptford 1 paste resembles that of Woodland 1. It consists of a compact to hard clay body with predominantly medium and coarse sand clastics. Deptford 2 and Woodland 2 are also similar. The Deptford 2 variant consists of a very hard, fine clay body with variable amounts of coarse, very coarse, granule, and pebble sized sand. Finally, Deptford 2.2 combines the paste of Deptford 2 with sherd/grog-tempering. Also, three check stamped sherds from a single vessel exhibited sub-angular limestone or chert sand in addition to medium quartz sand inclusions. The limestone/chert inclusions may simply reflect a fortuitous admixture, but because it may also indicate a different source or cultural affiliation the material was identified as a variant of Deptford 1, which was referred to as Deptford 1a.

Table 9. Deptford Variant Ceramic Types by Site.

Culture Historic Type	38SU58	38SU191	38SU222	Field Site 2	Grand Total
Deptford 1 Check Stamped	2	12	7		21
Deptford 1 Cord Marked	2	3	8		13
Deptford 1 Fabric Impressed		1	8		9
Deptford 1 indet decorated		1			
Deptford 1 Wide-spaced Cord Marked		3			3
Deptford 1a Check Stamped			3		3
Deptford 2 Check Stamped	13	9	20	4	46
Deptford 2 Cord Marked	1	2	3		6
Deptford 2 Fabric Impressed	1	3	2		6
Deptford 2 indet decorated	1				
Deptford 2 indet stamped	1		1		2
Deptford 2 Linear Check Stamped			4		4
Deptford 2 Wide-spaced Cord Marked	2	3			5
Deptford 2.2 Fabric Impressed		1			111
Grand Totals	23	38	56	4	121

The most abundant surface treatment types include check stamped, cord marked, linear check stamped, and fabric impressed. The heavy contribution of cord marking and fabric impressing, which is not evident on the Savannah River, is generally assumed to represent trait admixture with the more northerly ceramic traditions of North Carolina (Cable 1998a). The Mattassee Lake sequence does not reflect this influence, but more recent studies in the sandhills (Blanton et al. 1986), at Minim Island in the mouth of the Santee (Espenshade and Brockington 1989), and in the Poinsett region (Cable 1998b, 1999, 2002b) do. Significant proportions of cord marked and fabric impressed sherds that are technologically identical to Deptford Check Stamped occur in the same deposits in these instances. The disparity presented by Mattassee Lake is most probably a

consequence of typology rather than substantive assemblage distinction as most sand-tempered fabric impressed and cord marked sherds were lumped into the Cape Fear series by definition.

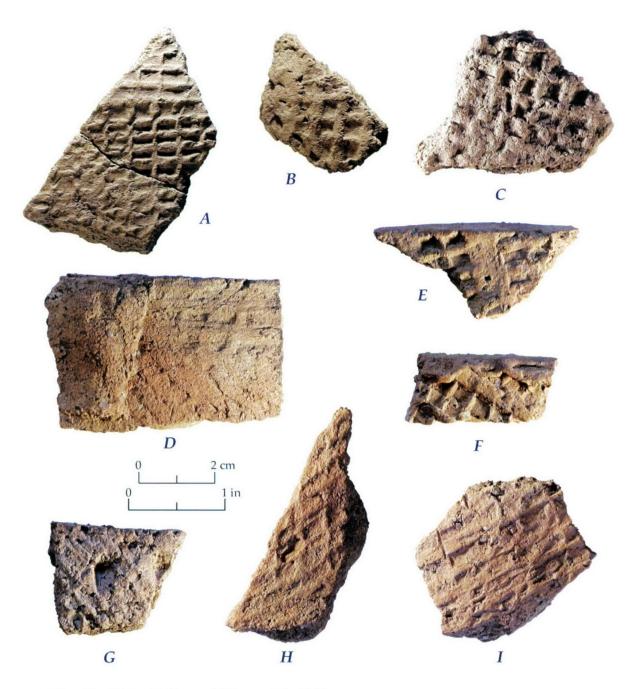
Chronological difference between the variants has yet to be established in the Poinsett region (Cable 2002b). In fact, relative proportions of particular surface treatment types, which are generally relied upon to distinguish Deptford phases, tend to manifest themselves on a site-by-site basis rather than by variant. In an earlier testing study conducted at sites situated around Big Bay (Cantley et al. 2002), the Deptford assemblage at 38SU18 was dominated by check stamped types, while fabric impressed and cord marked treatments dominated those of the other two sites. These patterns emerged in spite of the relatively even representation of Deptford 1 and 2. This suggested that 38SU18 might contain, primarily, a Deptford I or II occupation, while the other two sites, 38SU150 and 38SU243, might be predominantly comprised of later Deptford III components. All three of the sites in the current project have Deptford assemblages dominated by various types of check stamped, suggesting that they contain, predominantly Deptford I and/or II occupations.

Seventy examples of Deptford Check Stamped were identified in the collection (Figure 8). The type was originally named Deptford Bold Check Stamped by Caldwell and Waring (1939:118-119; see also Waring and Holder 1940), but more recent applications have simplified the name by dropping the term "bold." The surface treatment was applied with a carved paddle and consists of a grill of raised lands, which intersect to commonly form squares or rectangles. Although triangular shaped checks are common, only simple, square and rectangular checks were identified in the current collection (Figure 8: A-D, G-I). Specimen 104-1 from 38SU222 appears to have had a layer of clay added to the exterior of the vessel covering the check stamping prior to firing (Figure 8:D). This phenomenon has been observed sporadically in the Poinsett region and may have been a fairly common practice in pot manufacture. Precisely why this was done is not known, but this practice may have resulted in increased vessel wall strength by slowing the rate of dehydration by reducing porosity and consequently allowing greater numbers of clay particles to be drawn together and bonded (see Shepard 1954:23). Another specimen (38SU222, 12-1, Figure 8:G) exhibited a widely spaced line of rectangular punctuated impressions at a location incidental to the rim. Similar design strategies are used on Mississippian ceramics, although in these cases the punctuations are generally comprised of hollow reed punctations. The specimen was assigned to the Deptford 2 series on the basis of the check stamped design, although it is also possible that it represents a Mississippian type perhaps unique to the region. Taylor (Steen and Taylor 2002) has found similar examples in the nearby Wateree-Congaree confluence to the west that he speculates may represent a late prehistoric or protohistoric type.

The closely related type Deptford Linear Check Stamped is distinguished from Deptford Check Stamped by land width variation. Lands of equal width characterize the latter type, while the former consists of parallel longitudinal lands separated by finer transverse lands giving the appearance of a railroad track. Four examples of this type were identified in the collection (Figure 8: E-F).

Sixteen sherds were classified as Deptford Fabric Impressed (Figure 9: A-H). The type has never been formally defined, but is commonly used to refer to fabric impressed material that is otherwise technologically identical to Deptford Check Stamped (see Cable 1993, 1998b:204). The type, Cape Fear Fabric Impressed, defined by Anderson (1982:293-299) from the Mattassee Lake excavations should be considered a partial correlate. Anderson noted that about 11 percent of his sample corresponded technologically to the local Deptford types and was probably contemporaneous with these types. The remainder of the sample was inferred to occur at a later chronological position than Deptford and would correspond closely with the type Cape Fear Fabric Impressed as the term is applied in the Poinsett region (see Cable 1998b: 215-218). Both rigid (Figure 9: B-F, H) and non-rigid (Figure 9: A, G) warps were represented in the fabrics used to impress vessel exteriors. One specimen (38SU191, 108-1) contained sherd/grog temper as well as medium to very coarse sand inclusions and was assigned to the Deptford 2.2 sub-series.

Figure 8
Deptford Check Stamped/Linear Check Stamped



Deptford Check Stamp/Linear Check Stamp: A. Deptford 1 Check Stamp (38SU58, 2-2), B. Deptford 2 Check Stamp (38SU58, 1-1), C. Deptford 2 Check Stamp (38SU58, 35-2), D. Deptford 2 Check Stamp (38SU222, 101-4), E. Deptford 2 Linear Check Stamp (38SU222, 187-1), F. Deptford 2 Linear Check Stamp (38SU222, 103-1), G. Deptford 2 Check Stamp, note rectanular punctations incidental to rim (38SU222, 12-1), H. Deptford 1 Check Stamp (38SU222, 107-1), I. Deptford 2 Check Stamp (38SU222, 30-1).

Deptford Cord Marked was recognized by DePratter (1991:172) to distinguish examples of cord marked pottery in the mouth of the Savannah sequence with paste identical to other Deptford types in that region. Previously, the type had been subsumed under the larger grouping of Wilmington Heavy Cord Marked (Caldwell and Waring 1939) that contained both sand- and grog/sherd-tempered cord marked specimens. Anderson (1982) also identified minor amounts of Deptford Cord Marked in the Mattassee Lake sites. The author uses this type name here instead of Deep Creek or Yadkin to draw a distinction between the local Lower Wateree sequence and those sequences much further to the north where a full-blown Northern Tradition exists (Phelps 1983; but see Blanton et al. 1986). Twenty-seven sherds of this type were identified in the collection (Figure 9: I-L). Parallel application patterns predominated (n=14), while cross applications were observed as a minor constituent (n=5). Cordage diameters ranged between 1 and 2.5 mm. An important subtype, Deptford Wide-spaced Cord Marked, consisted of single cordage impressions applied in a parallel pattern and spaced at distances of 3 to 6 mm across the sherd body (see Figure 9: I-J).

The mean sherd wall thickness for the overall Deptford series collection is 7.76 ± 1.58 mm (n=119). The Deptford 1 sample (n=48) may be thicker, with a mean of 7.84 ± 1.27 mm, compared with 7.70 ± 1.77 mm for the Deptford 2 sample (n=71). However, a two-sample t-test (t= 0.4699 w/117 df, p=0.3196) failed to demonstrate a difference at the 0.05 level of significance. Larger samples from the region have failed to demonstrate a significant difference in mean thickness of the two variants as well, although Deptford 1 consistently registers a higher mean thickness.

Nine rim sherds were identified in the Deptford series collection. All of these were plain rims with the exception of a single rolled rim on a Deptford 2 Linear Check Stamped sherd. One plain rim also exhibited incidental rectangular punctuates (Figure 8: G). Lip shapes were quite variable, but generally occurred on flared or direct neck orientations (Table 10). Minority orientations consisted of recurved and recurved/incurved. The predominant vessel forms noted in the rim data were straight and flared open mouth jars. The absence of conoidal base fragments suggests that most of the jars were constructed with rounded bottoms.

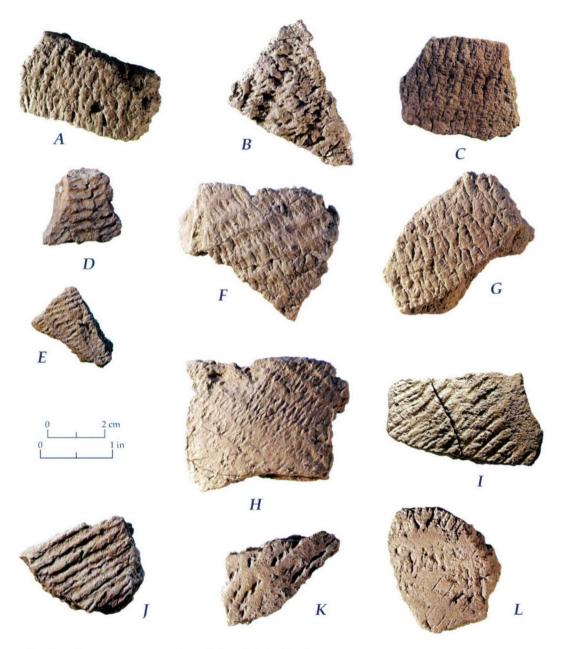
Table 10.	Lip Shape	by Neck Orientation,	Deptford Series Rims.
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	Neck Orientation									
Lip Shape	Flared	Recurved	Recurved/Incurved	Straight/Direct	Grand Total					
Flattened		1	1		2					
Flattened Beveled				1	1					
Rounded				1	4.1					
Sub-rounded				1	1 1					
Tapered Flattened	1			1	2					
Tapered Rounded	1				1					
Truncated Rounded	1				19					
Grand Total	3	1	1	4	9					

BERKELEY

The Berkeley series was proposed by Cable (1993) to distinguish sherd- and grog-tempered pottery with abundant amounts of medium and medium-coarse sand inclusions from those containing only very sparse sand inclusions. It was his hypothesis that Berkeley series material represented a transitional phase of experimentation bridging the transformation of Deptford paste into Wilmington. Recent work in Horry County (Cable 1998a) has provided some support for this proposition as the Hanover I series, a correlate of Berkeley, occupied an intermediate position in a surface treatment seriation between the local Deptford correlate and.

Figure 9 Deptford Fabric Impressed and Cord Marked



Deptford Fabric Impressed and Cord Marked: A. Deptford 2 Fabric Impressed (38SU58, 5-1), B. Deptford 2 Fabric Impressed (38SU58, 35-1), C. Deptford 2 Fabric Impressed (38SU222, 59-1), D. Deptford 2 Fabric Impressed (38SU222, 28-1), E. Deptford 1 Fabric Impressed (38SU222, 82-1), F. Deptford 2 Fabric Impressed (38SU191, 39-2), G. Deptford Fabric Impressed (38SU191, 37-1), H. Deptford 2 Fabric Impressed (38SU191, 39-1), I. Deptford 1 Cord Marked (38SU58, 12-1), J. Deptford 2 Cord Marked (38SU222, 71-1), K. Deptford 2 Wide-spaced Cord Marked (38SU58, 2-1), L. Deptford 1 Wide-spaced Cord Marked (38SU191, 233-1).

Hanover II, a Wilmington correlate. The chronological position of Berkeley, however, has not yet been established by independent dating or stratigraphic analysis. Moreover, the recent work in the Big Bay region suggests that, at least in some regions, Wilmington series ceramics may have as deep a time range as the Deptford series. The apparent later chronological position of Wilmington on the northern South Carolina coast as hypothesized by Cable (1998a) may very well reflect the later diffusion of the sherd/grog manufacturing tradition both northward and southward along the Atlantic coast. The Berkeley series material in the collection consisted of only two indeterminate sherds from 38SU222.

CAPE FEAR

Stanley South (1976:18-20) first described the Cape Fear series, or ware-group as he conceived it, from surface collections made in 1960 on sites located between Wilmington, NC and Myrtle Beach, SC. He applied the term to virtually all of the sand-tempered cord marked, fabric impressed, and net impressed pottery within the collection. Many have suggested that the series was too broadly applied by South and other investigations in North Carolina indicate that such material should be separated into a sequence of series based on sand inclusion coarseness and density (see Anderson and Logan 1981:107-108; Herbert 2003; Trinkley 1981:11). Coastal North Carolina sequences contain at least two sand grain size modes that are used to distinguish series (Phelps 1983). The Deep Creek series consists of pastes with abundant, coarse sand and can be chronologically correlated with Deptford. Other series (i.e. Mount Pleasant and Cape Fear) containing finer grained pastes are roughly dated to a post-Deptford or late Middle to Late Woodland period context (i.e. AD 500-900 or 1500 to 1100 BP). Trinkley (1981) has identified a correlate to these later series on the central South Carolina coast that he named McClellanville. He recognized four surface treatment types within the series: (1) simple stamped, (2) cord marked, (3) fabric impressed, and (4) plain. Anderson (1982:295) felt that a Deep Creek-to-Mount Pleasant sequence would eventually be demonstrated to occur in the lower Santee River valley, but he was unable to demonstrate this at Mattassee Lake. Consequently he chose to apply Cape Fear to his entire assemblage of sand-tempered textile marked ceramics, much in the way Stanley South had earlier done. Later, Cable (1993) proposed to apply the series exclusively to the finer pasted sand-tempered material in the Francis Marion National Forest that pre-dates the Mississippian period, reserving the series name of Deptford for the coarse pasted, textile marked ceramics possessing an identical paste to Deptford Check Stamped. This is the position adopted for the current study as well.

Eighty-eight sherds belonging to the Cape Fear series were identified in the current collection (Table 11). In the larger Poinsett sample two modal paste groupings have been recognized. Cape Fear 1 is a compact paste with abundant medium quartz sand background inclusions, while Cape Fear 2 is a compact to hard paste with sparse medium to coarse quartz sand background inclusions. Examples of both paste variants were identified in the current collection. Cores are almost always uniformly dark (black to very dark gray) and surface coloration is somewhat more yellowish and also darker than Deptford. Colors range from brown (10YR 5/3) to gray (10YR 5/1) and from light brown (7.5YR 6/4) to reddish yellow (7.5YR 6/6). The dark cores indicate a degree of vitrification from relatively high firing temperatures, but the finer grain of sand inclusions may have inhibited bonding of the clay body and resulted in a softer paste than is typical of Deptford.

38SU191 and 38SU222 contain relatively large Cape Fear occupations that should provide a rare and excellent opportunity to define the early Late Woodland phase sequence in the Poinsett region. These assemblages resemble very closely the McClellanville phase described by Trinkley (1981) for the central coast region of South Carolina. Fabric impressed, cord marked and simple stamped types are present. The latter type suggests a cultural continuity with the later Santee series. Based on the tentative ceramic sequence for the region (see Figure 6) the Cape Fear assemblages from these sites should correlate with the Berkeley II and perhaps Santee I phases, which are estimated to date between about AD 500 and 900 AD.

Cord marking constituted the most popular surface treatment type in the collection. Two types were recognized, Cape Fear Fine Cord Marked and Cape Fear Cord Marked. The former consists of cordage impressions of less than 0.5 mm in diameter that are applied in a variety of patterns. The primary patterns are random obliterated overstamping (Figure 10: D, F-G) and carefully applied cross stamping at oblique to perpendicular angles (Figure 10: B, C, and H). Cape Fear Cord Marked is characterized by cordage impressions measuring greater than 1.0 to 2.0 mm in diameter (Figure 10: A). Parallel applications outnumber cross or perpendicular ones by a ratio of 2:1.

Only 3 sherds of Cape Fear Fabric Impressed were identified. Both rigid and non-rigid warps were recognized in the sample. One specimen (Figure 10: I) appears to evidence fine cordage running along the valley of the weft of the fabric. Cape Fear Simple Stamped has been recognized sporadically in the Poinsett region (see Cantley and Cable 2002). An unusually large number of the type occurs at 38SU222. The surface treatment was made with a carved paddle and applied in parallel and perpendicular/oblique patterns. The grooves are v-shaped and can extend rather deeply into the vessel wall (Figure 11: A-D). In these characteristics the type is identical to the type descriptions for Santee Simple Stamped (see Anderson 1982). It differs only in the composition of the paste, which is identical to that of Cape Fear Fabric Impressed and Cord Marked. In general, the type appears to represent a transitional type bridging the Cape Fear and Santee series and suggests a cultural continuity between the two.

Table 11. Cape Fear Series Ceramic Types by Site.

Culture Historic Type	38SU191	38SU222	Grand Total
Cape Fear 1 Cord Marked	1		
Cape Fear 1 Fine Cord Marked	6	3	9
Cape Fear 1 Fine Cord Marked/Paddle Edge	1		
Cape Fear 1 indet	2		2
Cape Fear 1 indet decorated	3	2	5
Cape Fear 1 indet stamped	1		
Cape Fear 1 indet textile marked	1		1
Cape Fear 1 Plain	6	1	7
Cape Fear 1 Simple Stamped	3	5	8
Cape Fear 2 Cord Marked	10	5	15
Cape Fear 2 Fabric Impressed		3	3
Cape Fear 2 Fine Cord Marked	2		2
Cape Fear 2 indet	7	3	10
Cape Fear 2 indet dec	6	2	8
Cape Fear 2 Plain		4	4
Cape Fear 2 Simple Stamped		11	11
Grand Total	49	39	88

The mean sherd wall thickness for the overall Cape Fear series collection is 6.53 ± 1.52 mm (n=81). The Cape Fear 1 sample (n= 33) may be thinner, with a mean of 6.35 ± 1.28 mm, compared to a mean of 6.66 ± 1.66 mm for the Cape Fear 2 sample (n=48). However, a two-sample t-test (t= 0.897 w/80 df, p=0.186) failed to demonstrate a difference at the 0.05 level of significance. In contrast, the Cape Fear series material is significantly thinner than the Deptford series sample (t= 5.476 w/199 df, p=0.000000065). Six rim sherds were identified in the collection, all of which were plain (Table 12). Flattened lips are most abundant in the sample and appear to represent slightly incurved open mouthed jars with slightly rounded bases. None of the

rims appear to derive from flaring rimmed open mouth jars. Three rims had simple stamping on their lips, while one exhibited an incised rim line running along the circumference of the orifice.

Table 12. Lip Shape by Neck Orientation, Cape Fear Series Rims.

Neck Orientation							
Lip Shape	Incurved	Slightly Incurved	Straight/Direct	Indet.	Grand Total		
Flattened		3			3		
Tapered Flattened			1		1		
Rounded				1	1		
Truncated Sub- rounded	1				1		
Grand Total		3			6		

SANTEE

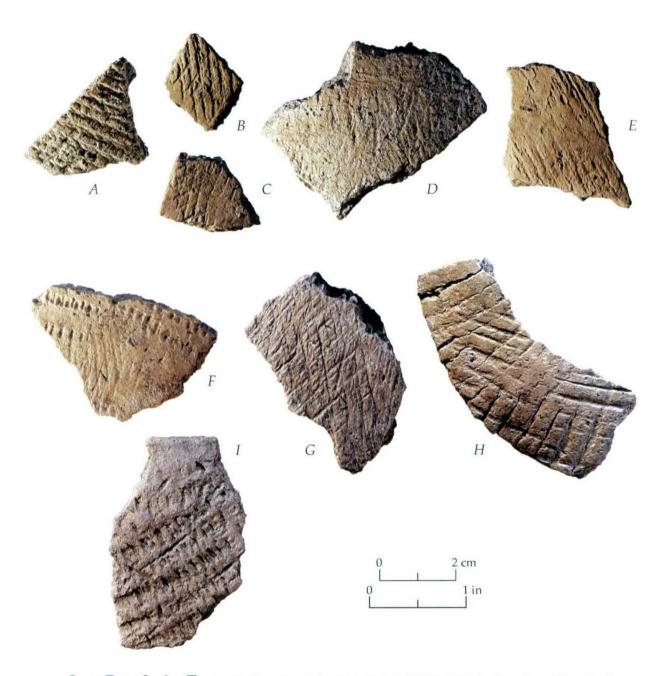
The Santee ceramic series was first described by Anderson (1982) from excavations conducted at Mattassee Lake. The principal diagnostic was a medium sand tempered simple stamped sherd type he named Santee Simple Stamped. Subsequent investigations on the Francis Marion Forest by Cable (Williams et al. 1993a, b) revealed that small numbers of cord marked and fabric Impressed sherds also contained the characteristic Santee paste and should be included in an expanded series description. Current phase reconstruction suggests that the series is representative of two ceramic phases. Very little is known of Santee series ceramics and phase dynamics in the Poinsett region. The Santee assemblages at 38SU191 and 38SU222 therefore assume a position of great importance for reconstructing the cultural chronological sequence in the region. This is particularly true because there appears to also be evidence for continuity between the Cape Fear and Santee ceramic series in the deposits of these sites.

Sixty-nine sherds belonging to the Santee series were identified in the current collection (Table 13). Two modal paste groupings have been recognized within this small collection. Santee 1 contains a compact paste with abundant medium to coarse quartz sand background inclusions, while Santee 2 is a compact to hard paste with abundant and well-sorted medium and fine quartz sand background inclusions. Cores are almost always fully oxidized and surface coloration ranges from reddish brown (5YR 5/3) to yellowish red (5YR 5/8) and from reddish yellow (7.5YR 6/6) to strong brown (7.5YR 5/8).

Table 13. Santee Series Ceramic Types by Site.

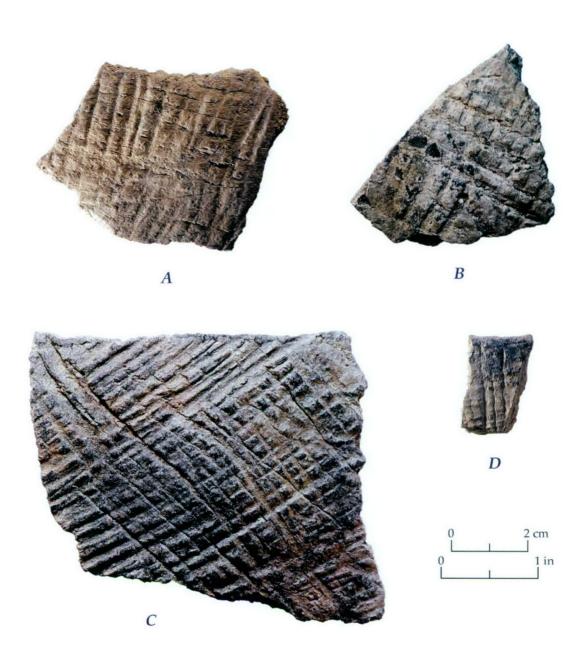
Culture Historic Type	38SU191	38SU222	38SU58	Field Site 2	Grand Total
Santee 1 indet decorated	1				
Santee 1 indet stamped	1				
Santee 1 Simple Stamped	1	17			18
Santee 2 Cord Marked	4				4
Santee 2 indet	3	4			7
Santee 2 indet decorated	3	1			4
Santee 2 indet stamped	1	2			3
Santee 2 Plain		2		2	4
Santee 2 Simple Stamped	5	21	1		27
Grand Total	19	47		2	69

Figure 10 Cape Fear Series Type



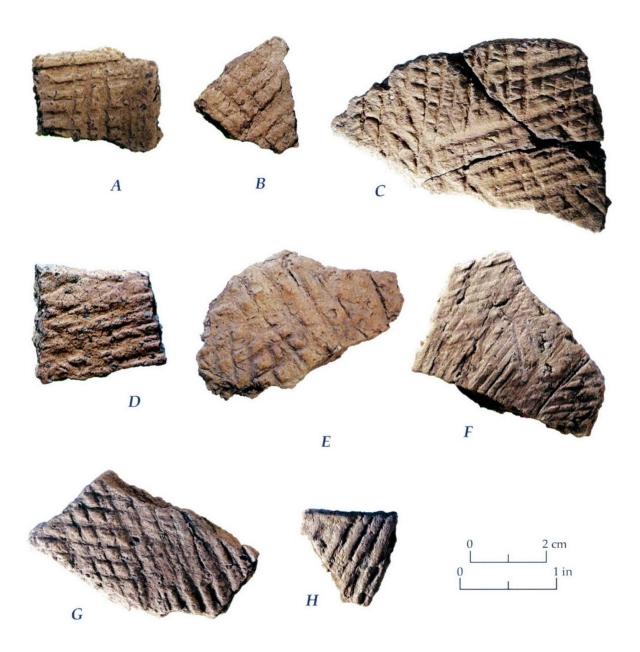
Cape Fear Series Types: A. Cape Fear 2 Cord Marked (38SU191, 66-1), B. Cape Fear 1 Fine Cord Marked (38SU191, 27-1), C. Cape Fear 1 Fine Cord Marked (38SU191, 152-2), D. Cape Fear 2 Fine Cord Marked (38SU191, 80-1), E. Cape Fear 1 Fine Cord Marked (38SU191, 153-2), F. Cape Fear 1 Fine Cord Marked, note paddle edge cord impressions (38SU191, 170-1), G. Cape Fear 1 Fine Cord Marked (38SU 222, 158-1), H. Cape Fear Fine Cord Marked (38SU222, 137-1) I. Cape Fear 2 Fabric Impressed (38SU 222, 115-1).

Figure 11 Cape Fear Simple Stamped



Cape Fear Simple Stamp. A. Cape Fear 2 Simple Stamp (38SU222, 134-1), B. Cape Fear 2 Simple Stamp (38SU222, 184-2), C. Cape Fear 2 Simple Stamp (38SU222, 184-1), D. Cape Fear 1 Simple Stamp (38SU191, 152-1).

Figure 12 Santee Series Type



Santee Series Types. A. Santee 2 Simple Stamp (38SU191, 64-1), B. Santee 2 Simple Stamp (38SU191, 74-2), C. Santee 2 Simple Stamp (38SU222, 72-1), D. Santee 1 Simple Stamp (38SU222, 38-2), E. Santee 1 Simple Stamp (38SU222, 8-1), F. Santee 2 Simple Stamp (38SU222, 24-1), G. Santee 2 Simple Stamp (38SU222, 102-2), H. Santee 2 Cord Marked (38SU191, 74-1).

variants.

Three types were recognized within the series in this collection. Santee Simple Stamped was the most abundant (n=45). Stamping impressions were characteristically v-shaped and of variable width as discussed by Anderson (1982:304). Cross stamping was most common, occurring on about 80 percent of the sherds large enough to determine stamping patterns, while parallel stamping was exhibited on 20 percent of this sample (Figure C12). Santee Cord Marked (n=4) resembled the cordage impressions exhibited on Cape Fear Cord Marked (see Figure 12: H). Cord impression diameters ranged between 1.0 and 2.0 mm and parallel applications dominate. Four sherds of Santee Plain were also identified. These are distinguishable from Woodland Plain solely on the basis of paste, which appears identical to that of the Santee Simple Stamped

The mean sherd wall thickness for the overall Santee series collection is 6.86 ± 1.47 mm (n=66). The two variants have roughly equal wall thicknesses when the sample is broken down. Santee 1 has a mean of 6.80 ± 1.70 (n=20), while Santee 2 yields a mean of 6.89 ± 1.38 (n=46). The Santee series has a somewhat thicker mean than the Cape Fear sample from the collection, but a significant difference is not demonstrated at the 0.05 level of rejection (t= 1.343 w/65 df, p=0.091).

Four rims were identified in the Santee series sample, 3 of which were plain. The remaining one was notched and occurred on a sherd of Santee Cord Marked (Figure 12.H). Straight and slightly incurved neck orientations were represented and suggest a similar vessel composition to that described for the Cape Fear series (i.e. slightly constricted and straight-sided open mouth jars with rounded bases. One of the rims exhibited simple stamping

PEE DEE

Pee Dee series ceramics were formally defined by Reid (1967) from the initial descriptive work performed by Coe (1952) at the Town Creek mound site in Montgomery County, North Carolina. The series consists primarily of complicated stamped designs (i.e. concentric circles, filfot crosses, arc angles, herringbone patterns, quartered circles, and split diamonds) applied with paddle stamps. An associated evolutionary rim sequence moving from plain rims to circular, hollow reed punctations below the rim and rosettes, to filleted rim strips provided the primary basis for ordering the ages of assemblages isolated at Town Creek. Reid noted close similarities between Pee Dee and the Savannah-Irene complex (Caldwell and McCann 1941) from the mouth of the Savannah and used the Pee Dee series to broadly refer to all Mississippian period ceramics in Piedmont North Carolina. His initial estimate of the age of the series, AD 1450-1650, appears too late or too confined based on current models of Mississippian design style change. The provisional sequence of rim treatments developed by DePratter and Judge (1986) for the upper Wateree River valley around Camden, for instance, would indicate a time range of approximately AD 1200 to 1670 for Pee Dee-like ceramics.

Anderson (1982:312-313) used the series in a more narrowly defined context to refer to ceramics associated with the Late Mississippian period (AD 1400-1600) in the Mattassee Lake sequence. He also recognized a Middle Mississippian series (AD 1200-1400), which he equated with Savannah ceramics, and a Protohistoric series (AD 1600-1715) that he identified as the Ashley series. Chief sorting criteria used to distinguish the three series were a predominance of curvilinear complicated stamped designs in Savannah, a predominance of rectilinear motifs in Pee Dee, and crude and sloppy stamps and applications in Ashley. These criteria, however, are not mutually exclusive and more recent attempts to distinguish these series have not met with success (see Cable et al. 1991; Poplin et al. 1993:223-227, Wheaton et al. 1992). Whether these problems are a function of low variability in stylistic change of complicated stamped designs or simply a problem of sampling cannot yet be determined. It is worth noting, however, that DePratter and Judge (1986) have only been able to identify chronological variation at the level of assemblages (i.e. rim style changes) in the upper Wateree Valley sequence. A sequence of complicated stamped designs has yet to be generated. Given these problems, classification of the Mississippian pottery in this report will be limited to a more broadly defined application of the Pee Dee series which includes all pottery of the Mississippian and possibly Protohistoric

periods in the region. Successful sorting criteria may be developed in the future to distinguish a sequence of Mississippian series ceramics as Anderson (1982) proposes, but at present a more generalized approach seems preferable so that Mississippian occupation periods at individual sites are not misrepresented.

Ninety-one sherds were assigned to the Pee Dee series in the current analysis (Table 14). A degree of variation in sand grain size was noted and recorded by dividing the collection into three paste variants. Pee Dee 1 corresponds to similar material identified simply as Pee Dee series in earlier projects in the Poinsett area (see Cable 1998b:221-229; Cable 1999:A-33-37). The modal paste is what might be best described as a uniform, medium to coarse grit. Sand inclusions are densely packed in the paste matrix and homogeneously size-sorted with very few specimens exhibiting grain sizes that stand out from the pervasive background sands. The paste is characteristically very hard and the texture is predominantly gritty rather than sandy. Pee Dee 2 has a much coarser texture and a highly heterogeneous sand grain profile. Background inclusions are characterized by significant proportions of coarse to granule-sized sand. It is as equally hard and gritty as Pee Dee 1. This variant is primarily distinguished by greater coarseness and abundance of quartz sand particles. A fine paste variant (Pee Dee fp) was also identified. This paste is hard and is comprised primarily of clay with sparse fine quartz sand inclusions. The chronological relationship between the variants is not established at present.

The Pee Dee series material is clearly the hardest ceramic series in the Poinsett region and coloration patterns suggest that firing technology had been well refined by this time to produce an extremely hard pottery. Cores were uniformly dark gray to black throughout, indicating a consistent degree of vitrification had been achieved, while exterior coloration ranged between reddish yellow (7.5YR 6/6) or strong brown (7.5YR 5/6) and light brown (7.5YR 6/3) or brown (7.5YR 5/3). Moreover, most of the specimens exhibited very clear surface coloration with almost no evidence of fire clouding. Taken together, these characteristics would suggest extremely hot firing conditions and a well-controlled oxidizing atmosphere in which clay bodies were partially vitrified. Sand is not an optimal bonding agent due to its roundness see Shepard 1964: 6-31), but it would appear that this limitation was mostly mitigated by high firing temperatures. Breakage during firing and also during use was probably not high due to the uniform and dense concentration of sands with a homogeneous grain size distribution.

Table 14. Pee Dee Series Ceramic Types by Site.

Culture Historic Type	38SU191	38SU222	38SU58	Grand Total
Pee Dee 1 Complicated Stamped	9	23		32
Pee Dee 1 indet	2	4		6
Pee Dee 1 indet stamped	4	2		6
Pee Dee 1 Plain		1		1
Pee Dee 1 Punctated		1		1
Pee Dee 2 Complicated Stamped	12	5		17
Pee Dee 2 indet	2	6		8
Pee Dee 2 indet stamped	2	7		9
Pee Dee 2 Plain	2	2		4
Pee Dee 2 Punctated			1	
Pee Dee fp Complicated Stamped		5		5
Pee Dee fp Plain	1			
Grand Total	34	56		91

Pee Dee Complicated Stamped was formally described by Reid (1967:42-52) from ceramics recovered at Town Creek mound site located in the upper Pee Dee River valley of North Carolina. The salient characteristics of the type have already been described above. The current sample consists of 54 sherds (Figures 13 and 14). Design motifs or elements were identified on 17 of the sherds. Three different motifs were recognized, including filfot crosses (n=4) (see Figure 13: A, D), curvilinear arc-angles (n=1), and zig-zags (n=13) (Figure 147: A-B). The zig-zag motif was identified on sherds from a single partial vessel, explaining its unusual preponderance. The zig-zag stamp was carefully applied to connect peaks and valleys creating the visual effect of nested squares. Portions of unidentified curvilinear and rectilinear motifs were also identified, along with straight lines.

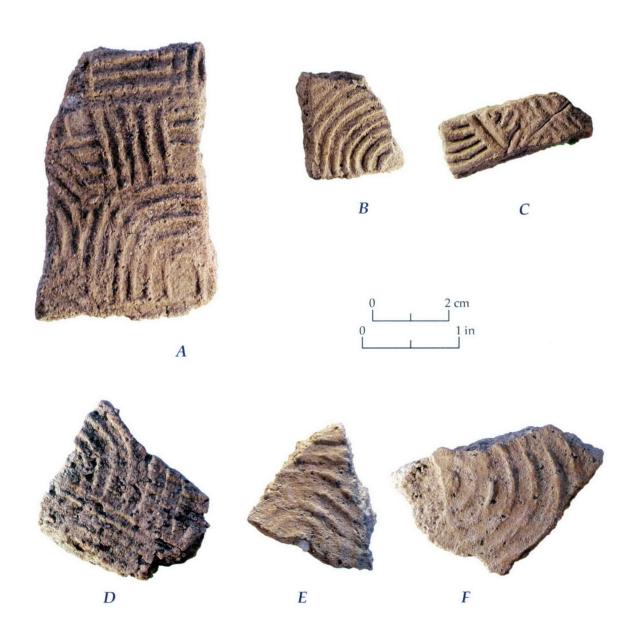
Pee Dee Plain was formally described by Reid (1967:52-54) from the Town Creek collections. He included a number of surface treatments within this type that are more commonly classified separately, including plain burnished, polished, and incised. He notes some differences between his plain category and the complicated stamped pottery. The plain material had a somewhat finer paste, coloration was overall somewhat lighter, and vessel forms consisted primarily of deep, hemispherical bowls, carinated bowls, and globular, constricted neck jars. Pee Dee Complicated Stamped vessel forms were primarily shallower hemispherical bowls and globular to cylindrical jars with flat or rounded bottoms. The current sample consisted of only 6 sherds. Plain surfaces were not always uniformly smoothed and sand inclusions protruded through the finish on many specimens. Cores were dark gray to dark reddish brown and surface coloration corresponded closely to that described for the complicated stamped material from the collection. It is probable that a significant number of plain sherds actually affiliated with the Pee Dee series are subsumed under the Woodland Plain grouping.

Two sherds exhibited linear arrays of small, hollow reed punctuations and were identified as *Pee Dee Punctated* (Figure 14: N-O). Minor amounts of punctated types such as these have been associated with a number of Mississippian assemblages throughout the Southeast, including Woodstock and Etowah deposits in northern Georgia (see Wauchope 1966; Cable et al. 1994), Town Creek in North Carolina (see Coe 1995; Reid 1967), and late prehistoric and protohistoric occupations in central Georgia (i.e. Ocmulgee Fields; see Wauchope 1966:87-90) and Tennessee (i.e. Dallas; Lewis and Kneberg 1946: 94-98).

The mean vessel width for the Pee Dee series sample is 7.14 ± 1.47 mm (n=79), which is close to the series mean for the overall collection from the PECR. However, the Pee Dee1 variant exhibits significantly thinner body wall thicknesses than the Pee Dee 2 variant. The former sample has a mean of 6.73 ± 0.93 mm (n=35), while the latter yielded a mean of 7.49 ± 1.83 mm. A two-sample t-test comparing the samples indicated a significant difference at the 0.05 level of rejection (t = 2.264, df = 56, p = 0.014). The fine paste variant numbered only 6 specimens and had a wall thickness mean of 7.41 ± 1.83 mm.

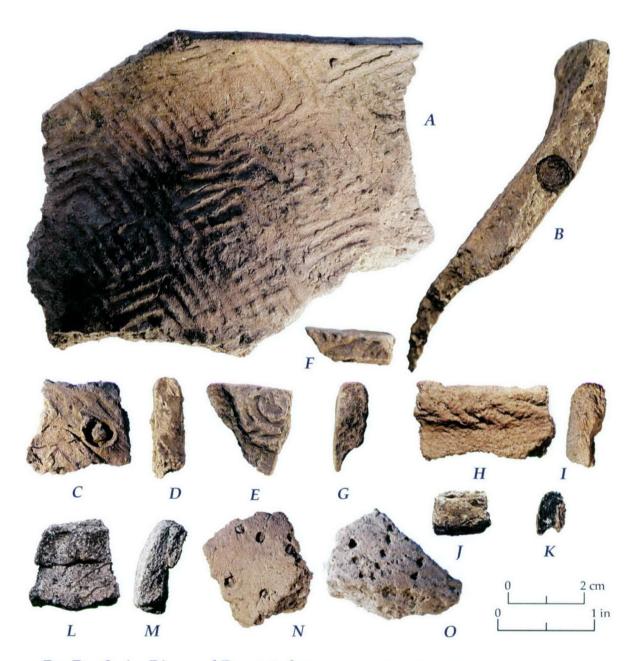
Fourteen rims are represented in the collection (Table 15). The distribution of rim types by site, indicates that the Mississippian occupations at 38SU191 and 38SU222 may be chronologically offset. The former site's assemblage is dominated by appliqué rim strips (Figure 14: J-M) and folded rims (Figure 14: H-I), which are characteristic of the Lamar period, while the rim assemblage at 38SU222 is characterized by plain (Figure 14: A-B, E-G), notched, and incidental hollow reed punctate decoration (Figure 14: C-D). Correlating this information with the Wateree Valley sequence (see DePratter and Judge 1986) suggests that the Mississippian occupation at 38CD222 predominantly occurred between about A. D. 1250 and 1350, while that at 38SU191 primarily occurred between about A. D. 1400 and 1500. A somewhat unusual decoration is exhibited on a fine paste variant rim (Figure 14: F). Here the complicated stamping that appears on the exterior of the sherd was continued onto the top of the lip. Flared and straight neck orientations are dominate the neck orientations (Table 16) and it is inferred that they occurred on open-mouth flare-rim jars and deep bowls, hemispherical bowls, and straight-sided open mouth jars. Single rims with incurved and recurved necks were also identified. The former represented an incurved jar/bowl, while the latter represents a restricted orifice jar with a slanted neck (figure 14: A-B).

Figure 13 Pee Dee Complicated Stamped



Pee Dee Complicated Stamped: A. Pee Dee 2 Complicated Stamped (38SU222, 86-1), B. Pee Dee Fine Paste Complicated Stamped (38SU222, 26-2), C. Pee Dee Fine Paste Complicated Stamped (38SU222, 1-1), D. Pee Dee 2 Complicated Stamped (38SU191, 77-1), E. Pee Dee 1 Complicated Stamped (38SU191, 100-1), F. Pee Dee 1 Complicated Stamped (38SU191, 151-1).

Figure 14
Pee Dee Series Rims and Punctated



Pee Dee Series Rims and Punctated: A-B. Pee Dee 1 Complicated Stamped, front and profile views (38SU222, 159-1), C-D. Pee Dee 1 Complicated Stamped w/incidental Hollow Reed Punctate Decoration, front and profile views (38SU222, 62-1), E-G. Pee Dee Fine Paste Complicated Stamped, front, top (note complicated stamped decoration), and profile views (38SU222, 54-2), H-I. Pee Dee 1 indeterminate w/folded rim, front and profile views (38SU191, 10-1), J-K. Pee Dee 1 Indeterminate w/rim strip, front and profile views (38SU191, 58-1), L-M. Pee Dee 2 Complicated Stamped w/ pinched rim strip (38SU191, 77-1), N. Pee Dee 2 Punctated (38SU58, 9-1), O. Pee Dee 1 Punctated (38SU222, 102-1).

Table 15.	Pee Dee	Series Rim	Types	by Site.
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Rim Type	38SU191	38SU222	Grand Total
Folded Rim	1		国际 第1条系
Incidental Hollow Reed Punctated		1	1
Notched Rim	1	1	2
Pinched Rim Strip	1		
Plain Rim	1	6	7
Indet. Rim Strip	1		
Strip Missing from Rim	1		Marin Parli
Grand Total	6	8	14

Table 16. Pee Dee Series Rims, Lip Shape by Neck Orientation.

	Neck Orientation										
Lip Shape	Flared	Incurved	Recurved	Straight/Direct	Grand Total						
Bevelled Rounded		1			表现一份上海企						
Flattened			1	2	3						
Indet.				1							
Rounded	1			2	3						
Sub-rounded	2				2						
Tapered Flattened	2			1	3						
Tapered Rounded	1										
Grand Total	6		1	6	14						

UNIDENTIFIED

A single fabric pressed sherd (38SU222, 101-1) containing crushed granitic rock and quartz sand was identified in the collection. It is assumed that it is associated with the Deptford occupation at 38SU222, but it may have originated from extra-local context. Pastes of this type are more common in the southern North Carolina coastal plain (see Herbert 2003:58-59). In the Fort Bragg region crushed rock-tempered series are affiliated with the Middle Woodland period.

SUMMARY AND CONCLUSIONS

The ceramic analysis provides a basis for evaluating the occupation history of the 3 sites tested during this project. 38SU58 is dominated by Deptford series ceramics, and in particular Deptford Check Stamped. Although small amounts of Deptford Cord Marked and Fabric Impressed were also present, the dominance of check stamping suggests that the main occupation at the site is associated with the Deptford I phase. Thom's Creek occupation is of secondary importance on this site. Minor Refuge, Santee and Pee Dee occupations were also identified. Major occupations at 389SU191 consist of Deptford II (Deptford Check Stamped, Linear Check Stamped, Cord Marked, and Fabric Impressed), Berkeley II (Cape Fear Fine Cord Marked, Cord Marked, and Simple Stamped), Santee I (Santee Simple Stamped and Cord Marked), and Lamar components. Minor Thom's Creek and Refuge occupations were also documented. 38SU222 appears to contain a continuous reoccupation sequence from Berkeley II through the Savannah period. It also contains a major Deptford component that appears to span the Deptford II and III phases based on the relative abundance of Deptford Fabric Impressed and Cord Marked. A minor Thom's Creek component was also identified at this

site. The Berkeley II through Santee components at 38SU191 and 38SU222 are unique in terms of their size and extent and in their potential to provide a basis for defining the Late Woodland period in the region.

VI. SUBSISTENCE STUDIES

INTRODUCTION

This archaeobotanical analysis focuses on macroplant remains collected by flotation from sixteen Site 38SU191 2 to 6 liter unit column samples from two test units (Units 3, 4) from the Poinsett Electronic Combat Range (PECR), Sumter County, South Carolina. The nine Unit 3 column samples were collected from 10 centimeter increments between 10 and 100 cm below surface. The seven Unit 4 column samples were likewise collected in 10 centimeter increments, from 10 to 30 cm below surface and from 50 to 110 cm below surface. On the basis of diagnostic artifacts and general context, the unit column samples were determined to date from the Early Archaic through Mississippian periods. Vertical artifact distributions within these units suggest three occupational horizons may be present within the Unit 3 and 4 deposits. A Late Woodland/ Mississippian Cape Fear/Pee Dee component appears to be present between 10 and 30 cm below surface in both excavation units. An earlier Deptford component was identified between 30 and 60 cm below surface in Unit 3 and 60 and 90 cm below surface in Unit 4. Finally, an Early/Middle Archaic component is hypothesized to underlie the late Early Middle Woodland component in Unit 3 (60-100 cm bs). A possible Archaic Period date is hypothesized for the 100 to 110 cm zone of Unit 4.

The Poinsett Electronic Combat Range (PECR) is located in the Middle Coastal Plain of Sumter County, South Carolina. The PECR is located near the divide between the Wateree River to the west, and the Pocotaligo River to the east. Ethnohistoric accounts of early historic Indian groups that occupied the inter-riverine upland zones of the Middle South Carolina Coastal region indicate that this environment, although representing an important aboriginal resource catchment, was occupied only on a seasonal or temporary basis, and served primarily as a source for nuts and game. Important landforms in project locality include Carolina Bays and xeric uplands. Carolina Bays are shallow elliptical depressions ranging from 1 to 4 kilometers in length. Thom (1970) argues that these wetland features represent relict ponds that were transformed into the characteristic shape of Carolina Bays through wave actions that were controlled by prevailing southwesterly winds, accompanied by cool, conditions during the middle to Late Wisconsin. Nine Carolina Bays are located on the PECR. The largest of these bays is called Big Bay, or Upper Big Bay. Big Bay is located near the crest of the sand hills and next to the divide between the Wateree and Pocotaligo drainages. The bay serves as the headwaters for Sammy Swamp, a tributary of the Pocotaligo. A smaller bay immediately south of Big Bay is drained by Halfway Swamp, a tributary of the Santee River. The current project locality is situated within an oak hammock in Brunson's Swamp, which is a back swamp of the Wateree River. Modern vegetation in the locality consists of a mature, mixed oak and pine forest.

The prehistoric occupation of this site appears to represent a palimpsest of habitations utilized for brief time periods, most probably in the spring through fall months. Archaeological evidence from the 38SU136/137 and 38SU141 data recoveries indicates that with the significant exception of the Early Archaic Palmer 2/3 period, this Historic Period pattern of utilization typifies the entire occupational history of sites at the PECR. On the basis of higher raw material density and diversity, and greater proportions of tools associated with Early Archaic occupations, the Palmer 2/3 component of both sites appears to have consisted of longer term habitations of two to three household groups per settlement. These sites likely served as seasonal base camps. The Palmer 2/3 occupations seem to have ended circa 9,000 B.P. Habitations dating both before and after the Palmer 2/3 appear to have been shorter duration, temporary camps.

Figure 15 Unit 3 Wood Charcoal

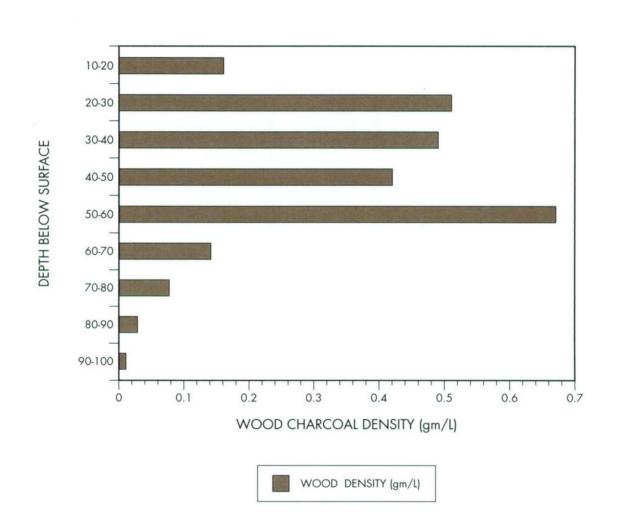
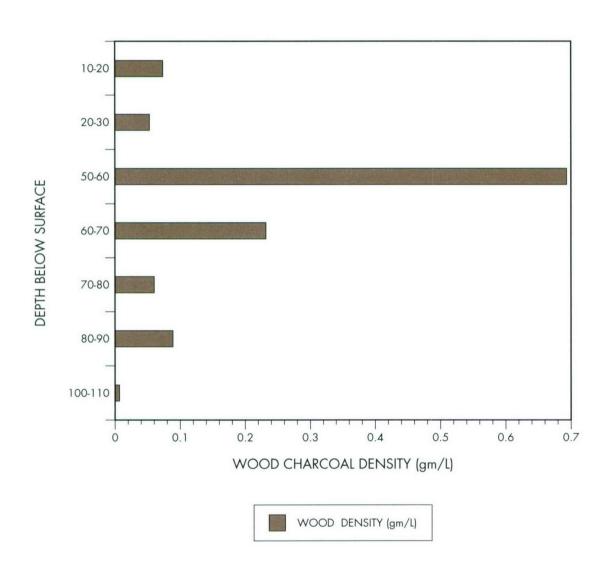


Figure 16 Unit 4 Wood Charcoal



Carbonized macroplant remains recovered from the flotation samples included 54 fragments of hickory nutshell, 11 grass florets, 134 fragments of pine needles, 5.65 grams of resin, and 37.99 grams of greater than 2.0 mm wood charcoal. The macroplant remains recovered during this analysis are summarized in Tables 1 through 4 and Figures 15 and 16. Table 17 presents sample volumes, wood charcoal weights, nutshell counts and weights, and quantities of pine needles and grass florets. Table 18 presents densities of wood charcoal and mast (expressed as weight and/or count of macroplant remains per liter of floated soil), mast to wood ratios (gram:gram), and pine to hardwood ratios.

Table 17. Summary of Archaeobotanical Remains

	Depth	D	V-1	Wood	D:-	Hickory Shell	Hickory	Pine	Grass		т.
Unit	Depin	bag	volume	Charcoal	Kesin	Shell	Shell	Needles	rioret		Туре
2	1000	,	5	0.40	0.10	0	0.00	27	,	Late	Cape Fear/Pee
3	10-20		3	0.69	0.13	2	0.02	37		Woodland/Mississippian	
2	20.20	2	_	1.00	0 54			40	1	late Early-Middle Woodland	Cape Fear/Pee
3	20-30	2	5	1.99	0.56			42	- 1		Dee/Deptford
3	30-40	3	3	1.35	0.12			4		late Early-Middle Woodland	Dantford
3	30-40	3	3	1.33	0.12			4			Deptford
3	40-50	4	5	1.95	0.14	14	0.10			late Early-Middle Woodland	Deptford
3	40-30	4	3	1.73	0.14	14	0.10			late Early-Middle	Depilora
3	50-60	5	3	1.80	0.21	7	0.09	3		Woodland	Deptford
3	60-70	6	6	0.80	0.09	11	0.06	3			Unknown
					0.09	- 1 1	0.00			Early/Middle Archaic?	
3	70-80	7	3	0.24				3		Early/Middle Archaic?	Unknown
3	80-90	8	5	0.14				8		Early/Middle Archaic?	Unknown
3	90-100	9	5	0.06				4		Early/Middle Archaic?	Unknown
										Late	Cape Fear/Pee
4B	10-20	10	2	1.45						Woodland/Mississippian	
										Late	Cape Fear/Pee
4	20-30	11	3	1.10	0.47			9		Woodland/Mississippian	Dee
										late Early-Middle	
40	50.40	1.4	0.5	1501	0 00					Woodland/Late	Deptford/Cape
4B	50-60	14	2.5	15.06	2.28					Woodland	Fear
	10.70	1.5	4	0.00	1 00		0.07			late Early-Middle	- ()
4	60-70	15	4	8.02	1.23	2	0.07	8		Woodland	Deptford
4	70.00	1.	2	1 47	0.04	10	0.10	_		late Early-Middle	D .(1
4	70-80	16	3	1.47	0.26	13	0.10	2		Woodland	Deptford
4	80-90	17	2	1 47	0.00	5	0.02	4		late Early-Middle Woodland	Dankard
				1.67	0.08	3	0.02	6			Deptford
4	100-110	19	5	0.20	0.08			8		NCM/ Possible Archaic	Unknown
			61.5	37.99	5.65	54	0.46	134	11		

Table 18. Macroplant Densities

Unit	Depth	Volume	Overall Wood Charcoal Wt	Wood Density (gm/L)	Mast/Wood Ratio (gm:gm)	Hickory Shell Count	Hickory Shell Weight	Nutshell Ct Density	Nutshell Wt Density	Hardwood Ratio	Period	Туре
								0.40		2 /2	Late Woodland/Missis	
3	10-20	5	0.82	0.16	1/41	2	0.02	0	0.004	3/2	sippian	Cape Fear/Pee Dee
3	20-30	5	2.55	0.51						2/3	Woodland	Cape Fear/Pee Dee/Deptford
3	30-40	3	1.47	0.49						4/1	late Early-Middle Woodland	Deptford
3	40-50	5	2.09	0.42	1/21	14	0.1	2.80	0.020		late Early-Middle Woodland	Deptford
3	50-60	3	2.01	0.67	1/22	7	0.09	2.33	0.030	3/1	late Early-Middle Woodland	Deptford
3	60-70	6	0.86	0.14	1/14	11	0.06	1.83	0.010	3/17	Early/Middle Archaic?	Unknown
3	70-80	3	0.24	0.08						4/7	Early/Middle Archaic?	Unknown
3	80-90	5	0.14	0.03							Early/Middle Archaic?	Unknown
3	90- 100	5	0.06	0.01						·	Early/Middle Archaic?	Unknown
4	10-20	2	1.45	0.73						1/1	Late Woodland/Missis sippian	Cape Fear/Pee Dee
4	20-30	3	1.57	0.52						9/10	Late Woodland/Missis sippian	Cape Fear/Pee Dee
4	50-60	2.5	17.34	6.94						21/2	late Early-Middle Woodland/Late Woodland	Deptford/Cape Fear
4	40.70	,	0.05	2 21	1/13	0	0.07	0.50	0.010	4/1	late Early-Middle	Dontord
4	60-70	4	9.25	2.31	2	2	0.07	0 4.33	0.018	0/1	Woodland late Early-Middle	Deptford
4	70-80	3	1.73	0.58	1/17	13	0.1	3	0.033	5/3	Woodland	Deptford
4	80-90	2	1.75	0.88	1/88	5	0.02	2.50	0.010	1/1	late Early-Middle Woodland	Deptford
4	100- 110	5	0.28	0.06						5/2	NCM/ Possible Archaic	Unknown

Tables 3 and 4 present data on the identified wood charcoal assemblage. The number of identified wood species associated with each sample is tabulated in Table 19. The relative proportions of the entire wood charcoal assemblage associated with each level (listed as depth below surface) is presented in Table 20. Relative proportion values presented in this table list each taxon as a proportion of the entire identified wood charcoal assemblage found in a given sample context. These data provide information that is useful in reconstructing past forest composition, and hence, the paleoenvironment of the site locality in the past. Cable found vertical integrity in the archaeological deposits at sites 38SU136/137 and 38SU141, which

demonstrates that carbonized plant remains also possessed some degree of vertical integrity. Hence, wood charcoal assemblages associated with particular depth ranges in the current study may also possess vertical integrity and thus be roughly contemporaneous with archaeological horizons identified by Banguilan (this volume). Figures 1 and 2 graphically illustrate vertical distribution of the wood charcoal assemblages in each excavation unit. These figures illustrate the wood densities (grams of wood charcoal per liter of floated soil) from each sample in the Unit 3 and 4 soil columns.

The objectives of this subsistence study were: (1) to assess the integrity of the archaeological deposits and macroplant assemblages found in the archaeological deposits; (2) to assess prehistoric subsistence practices; (3) to use the recovered macroplant assemblage to aid in paleoenvironmental reconstruction; and (4) to examine settlement-subsistence systems associated with this swamp edge site.

Table 19. Identified Wood Charcoal

				\A/I ··		D 1				AII			
Unit	Depth	Baa	Pine	White Oak		Red Oak	Hardwood	Hickory	Ash	All Hardwood	UD	Period	Туре
3	10-20	1	12	8				,,,,,,		8		Late Woodland/Mississippian	Cape Fear/Pee
3	20-30	2	8	1		11				12		late Early-Middle Woodland	Cape Fear/Pee Dee/Deptford
3	30-40	3	16	4						4		late Early-Middle Woodland	Deptford
3	40-50	4	20									late Early-Middle Woodland	Deptford
3	50-60	5	15		1		4			5		late Early-Middle Woodland	Deptford
3	60-70	6	3		7		9	1		17	2	Early/Middle Archaic?	Unknown
3	70-80	7	4		2		2	2	1	7		Early/Middle Archaic?	Unknown
3	80-90	8	2			1	1			2		Early/Middle Archaic?	Unknown
3	90-100	9	1									Early/Middle Archaic?	Unknown
4	20-30	11	9	9				1		10	1	Late Woodland/Mississippian	Cape Fear/Pee Dee
4	60-70	15	18	3						3		late Early-Middle Woodland	Deptford
4	70-80	16	15	3		2	2	2		9	3	late Early-Middle Woodland	Deptford
4	80-90	17	10	1	4		2	3		10	2	late Early-Middle Woodland	Deptford
4	100-110	19	5	2						2		NCM/ Possible Archaic	Unknown
4B	10-20	10	4		4					4	4	Late Woodland/Mississippian	Cape Fear/Pee Dee
4B	50-60	14	21			2				2		late Early-Middle Woodland/Late Woodland	Deptford/Cape Fear
			163	31	18	16	20	9	1	95	14		

Table 20. Properties of Identified Wood

				White		Red					
Unit	Depth	Bag	Pine	Oak	Oak	Oak	Hardwood	Hickory	Ash	Period	Туре
3	10-20	1	60.0%	40.0%						Late Woodland/Mississippian	Cape Fear/Pee Dee
3	20-30	2	40.0%	5.0%		55.0%				late Early-Middle Woodland	Cape Fear/Pee Dee/Deptford
3	30-40	3	80.0%	20.0%						late Early-Middle Woodland	Deptford
3	40-50	4	100.0%							late Early-Middle Woodland	Deptford
3	50-60	5	75.0%		5.0%		20.0%			late Early-Middle Woodland	Deptford
3	60-70	6	15.0%		35.0%		45.0%	5.0%		Early/Middle Archaic?	Unknown
3	70-80	7	36.4%		18.2%		18.2%	18.2%	9.1%	Early/Middle Archaic?	Unknown
3	80-90	8	50.0%			25.0%	25.0%			Early/Middle Archaic?	Unknown
3	90-100	9	100.0%							Early/Middle Archaic?	Unknown
4	20-30	11	47.4%	47.4%				5.3%		Late Woodland/Mississippian	Cape Fear/Pee Dee
4	60-70	15	85.7%	14.3%						late Early-Middle Woodland	Deptford
4	70-80	16	62.5%	12.5%		8.3%	8.3%	8.3%		late Early-Middle Woodland	Deptford
4	80-90	17	50.0%	5.0%	20.0%		10.0%	15.0%		late Early-Middle Woodland	Deptford
4	100-110	19	71.4%	28.6%						NCM/ Possible Archaic	Unknown
4B	10-20	10	50.0%		50.0%					Late Woodland/Mississippian	Cape Fear/Pee Dee
4B	50-60	14	91.3%			8.7%				late Early-Middle Woodland/Late Woodland	Deptford/Cape Fear
			63.2%	12.0%	7.0%	6.2%	7.8%	3.5%	0.4%		

PROCESSING AND ANALYTICAL TECHNIQUES

FIELD COLLECTION AND FLOTATION

Prior to archaeobotanical analysis, each flotation sample was subjected to machine-assisted water separation in a Shell Mound Archaeological Project-type flotation device (SMAP machine) similar to that described by Watson (1976). This system was utilized because SMAP-style flotation systems consistently exhibit excellent retrieval rates (Pearsall 1989: 91-94). The heavy fraction trap was lined with 0.80 mm mesh.

LABORATORY PROCEDURES

In the laboratory, each flotation light fraction was first weighed, and then passed through nested geologic sieves (2.0 mm, 1.0 mm, 0.71 mm, 0.5 mm). Each size-graded light fraction was fully sorted under low magnification (10-25x). All charred plant remains that were greater than 2.0 mm were pulled from the sample matrices and were quantified by material type, by weight, and by

count. Material that was smaller than 2.0 mm was fully sorted, but only charred seeds were removed. Seeds and wood charcoal were identified with standard reference texts (e.g. Martin and Barkley 1961, Montgomery 1977; USDA 1974) and a modern reference collection.

The heavy fractions from each sample were partially sorted in order to collect faunal remains and to evaluate the recovery rate of the flotation process. Almost no faunal remains were found in the samples. Carbonized macroplant remains found in the heavy fractions were combined with those from the light fractions in the data tables. The heavy fraction sort yielded minor quantities of wood charcoal. Examination of the volume of wood charcoal that was found in the greater than 2.0 mm portions of the light and heavy fractions during analysis indicates that flotation separation of samples from this site was excellent.

Identifications were made of wood charcoal fragments from each flotation sample. Wood charcoal was separated from other debris before attempting specific identification. Whenever possible, wood specimens were identified to genus. Segments that were too fragmentary or poorly preserved to specifically identify were placed in the more general categories of ring porous, diffuse porous, conifer, and unidentifiable hardwood. Wood taxa were identified by comparison with charred and natural transverse, tangential, and radial thin sections of modern wood, as well as textbook illustrations. The transverse view was emphasized due to magnification limitations, size of the specimens, and time constraints. As needed, dichotomous keys were employed. Since these are geared toward fresh wood they are of limited use, but by employing both the microscopic and macroscopic keys, following multiple paths, and with frequent reference to the comparative collection, a genus can generally be determined.

In this analysis, the macroplant data were quantified by individual sample and excavation depth (all wood charcoal from a given range of depths below surface were quantified together). Several different comparison ratios (relative proportions of wood charcoal, hardwood to conifer ratios, count/weight densities) were utilized to study the macroplant remains. Count and/or weight densities of wood charcoal and nutshell per unit volume of soil were calculated for each sample. This measure was necessitated by differing sample volumes.

Ratios of identified hardwoods to conifers (exclusively pine) were calculated in order to examine past forest composition and changes in environment in the site localities over time. The relative proportions of the wood charcoal assemblage associated with each level is presented in Table 20. Percentage values presented this table list each taxon as a percentage of the entire wood charcoal assemblage. Examination of relative proportions of specifically identified wood taxa associated with level allows an assessment of patterns of wood use and past forest composition.

ANALYSIS

RECOVERY

The recovery of charred plant remains from prehistoric components at Site 38SU191 provides important information on macroplant preservation at this prehistoric period study site. Unfortunately, carbonized material other than wood charcoal and nutshell was very sparse in all sampled contexts (Tables 3-5). Carbonized macroplant remains recovered through flotation included 43.64.0 gm of wood charcoal and resin, 54 fragments of hickory nutshell, 134 pine needle fragments, and 11 grass florets.

Wood Charcoal

The overall density of wood charcoal, expressed as grams per liter of floated soil, was 0.709 gm/L. The density of wood charcoal found in the column samples ranged from a low of 0.01 gm/L to a high of 6.94 gm/L (Table 18). The greatest wood densities were found within 50 and 70 cm below surface in Unit 4 (Table 18, Figure 2). These exceptionally high wood densities, which are found in the upper 20 cm of the

Unit 4 Deptford component, roughly correspond to the highest artifact densities noted by Banguilan and Cable (this volume) at this site. Banguilan correlates the high artifact densities found in this unit with a Deptford midden deposit. Wood charcoal densities in Unit 4 range from a low of 0.06 (Archaic?) at 190 to 100 cm below surface to the aforementioned high of 6.94. The Deptford horizon, which extends from 50 to 90 cm below surface, exhibits the greatest wood densities between 50 and 70 cm below surface (6.94 gm/L, 2.31 gm/L). The densities between 70 and 90 cm below surface (0.58 gm/L, 0.88 gm/L) are more in keeping with the rest of the column samples. The wood density of the postulated Archaic horizon (90-100 cm BS) of 0.06 gm/L is similar to low wood densities in the preceramic Archaic horizon of Unit 3 (0.06 gm/L). The exceptionally high density of wood charcoal associated with the upper layers of the Unit 4 Deptford component suggests that this midden deposit was associated with a fairly intensive occupation and that fuelwood was directly deposited within the midden.

The Deptford component in Unit 3, like that of Unit 4, also exhibits greater wood charcoal densities than later and earlier components in this unit (Table 18, Figure 1). Wood densities within the Unit 3 Deptford component, which is found between 30 and 60 cm below surface, are respectively 0.49, 0.42, and 0.67 gm/L. These higher wood densities, like those of Unit 4, roughly correspond to high artifact densities found within the Deptford component of this unit. The underlying Early/Middle Archaic horizon (60-100 cm bs) exhibits wood charcoal densities ranging from 0.01 to 0.14 gm/L. The younger Cape Fear/Pee Dee horizon (10-30 cm bs) exhibits wood densities of 0.16 to 0.51 gm/L. The correspondence of high wood charcoal and artifact densities within Units 3 and 4 suggests that the Deptford occupation was more intensive than younger Pee Dee/Cape Fear and older Archaic occupations. This correspondence also indicates that macroplant remains have experienced relatively minor amounts of post-depositional bioturbation at this site.

Macroplant Remains Other Than Wood Charcoal

Carbonized hickory shell was relatively well represented in the macroplant assemblage. This good recovery was somewhat unexpected, since mast is generally sparse in all archaeological deposits in the PECR project locality (Raymer 1998, 2000). Thirty-four hickory shell fragments were found in the Unit 3 column samples and 20 derived from the Unit 4 samples (Table 18). Mast densities ranged from a low of 0.40 fragments per liter in the Cape Fear/Pee Dee horizon of Unit 3 (10-20 cm bs) to a high of 4.3 fragments per liter in the Deptford component of Unit 4 (70-80 cm bs). Forty-one of 54 fragments of mast were found within the Deptford horizon of both Units 3 (21 fragments in 40-60 cm bs samples) and 4 (20 fragments in 60-90 cm bs samples). Two fragments of nutshell (0.40 fragments/L) were recovered from the Cape Fear/Pee Dee horizon of Unit 3 and 11 were found in the upper 10 centimeters (60-70 cm bs) of the postulated Archaic horizon within this same unit.

Nutmast to wood ratios (Table 18-calculated by weight in grams and adjusted by densities) in Units 3 and 4 ranged from 1:14 (Unit 3, 60-70 cm bs) to 1:132 (Unit 4, 60-70 cm bs). These nutmast to wood ratios indicate that the collection of mast was not a primary focus of the Deptford period occupants of this site. These ratios and densities imply that mast was collected at these sites for immediate consumption of people living at fall encampments in the project locality. Higher densities and smaller ratios would be expected if mast was being collected and processed for long-term storage.

Carbonized pine needle fragments were common in all components of both Units 3 and 4 (see Table 17). The recovery of these remains is not surprising, given the clear dominance of pine in the wood charcoal assemblages of both sites (Tables 3-4). Grass florets were found in the Cape Fear/Pee Dee horizon of Unit 3 and the upper 10 centimeters of the postulated Early/Middle Archaic horizon of this same unit (N=10). A single grass floret was found in the Deptford horizon of Unit 4 (Table 17). These macroplant remains may represent remnants of tinder used in hearths at this site. No seeds were found in the macroplant assemblage. This lack of a seed assemblage is similar to that from other PECR sites examined by the author (Raymer 1998;

2000) and indicates that macroplant remains other than wood charcoal and nutmast are generally poorly preserved in the loose, sandy soils of the PECR.

INTEGRITY OF MACROPLANT ASSEMBLAGE

The recovery of charred plant remains provides important information on macroplant preservation and the integrity of the archaeological deposit at Site 38SU191. First, the overall weight density of wood charcoal (see Figures 1 and 2) was greatest in those horizons that also exhibited the highest artifact densities (Deptford period). The much higher representation of wood charcoal that is present in these levels implies that the archaeological deposits have experienced only minor amounts of post-depositional movement of carbonized macroplant remains. The recovery of most of the nutmast within these same Deptford horizons adds further support to this conclusion.

Second, differences in the relative proportions of hardwoods and softwoods found in each horizon indicates that macroplant remains have experienced only minor amounts of post-depositional movement. For example, proportions of pine are uniformly greater in the Unit 3 Deptford horizon than within either earlier or later horizons in this unit (Table 20). Hardwoods are more abundant in the younger Cape Fear/Pee Dee horizon and much more abundant in the older Early/Middle Archaic components. Pine proportions are likewise greater in the high density Deptford midden deposit of 50 to 70 cm below surface in Unit 4. Like Unit 3, hardwoods are more common in the Cape Fear/Pee Dee and Archaic horizons (Table 20). The high incidence of hardwoods in the Cape Fear/Pee Dee and Archaic contexts relative to the Deptford horizon (with its high pine component) indicates that carbonized macroremains in the Unit 3 and 4 deposits are in situ.

Finally, examination of the weight density of wood charcoal found in each block and level of every excavation unit offers support for our contention that wood charcoal found in these archaeological deposits is relatively in situ. First, charcoal densities don't steadily decrease with increasing depth, which is what one would expect if wood charcoal at greater depths was inserted into the deeper soil horizons as a result of postdepositional bioturbation. Second, the greatest densities are uniformly associated with a single cultural horizon, the Deptford. Finally, the greatest densities of wood charcoal correspond to the highest artifact densities at this site.

WOOD CHARCOAL ANALYSIS

Wood charcoal was found in 100 percent of the unit column and feature samples. Identifications were attempted on 272 fragments of wood charcoal (Table 19). Fourteen fragments were unidentifiable and 20 were identifiable only as indeterminate hardwood. The remaining wood specimens were identifiable to at least the genus level. Sixty percent of the wood charcoal assemblage was pine. The remaining 40 percent consisted of oaks, hickory, ash, and indeterminate hardwood.

The high proportion of identifiable wood fragments highlights the good state of preservation of the macroplant assemblage. The identified wood charcoal assemblage provides important insights into past forest composition and fuel use practices. Quantities of wood charcoal recovered from each level of each site sample are tabulated in Table 19. Table 20 present data on the relative proportions each identified taxa within excavation levels from which column samples were collected for flotation.

Wood charcoal was exclusively found in unit column samples at this site. No wood charcoal from features was recovered. These deposits likely contain carbonized wood from a variety of cultural and non-cultural sources. Therefore, wood charcoal samples from the unit column samples present an adequate dataset for examining local forest composition at these prehistoric sites. However, the characteristics of these samples which make them an excellent source for examining local forest composition are less than ideal for examining selective resource use for fuel and/or building materials. The wood charcoal that was found within these soil

samples likely represents a mixture of wood from burned building materials, postdepositionally deposited spent fuel remains, and naturally deposited wood charcoal from forest fires.

Wood charcoal from these unit column samples is examined in an effort to reconstruct paleoenvironment. Due to the lack of feature-related wood charcoal assemblages, we were unable to discuss possible patterns of selective resource exploitation. In this analysis wood counts, rather than weights, were used to evaluate the significance of taxa. This is in recognition of varying properties different wood types, resulting in more or less thorough combustion, and ultimately differential archaeological preservation. Wood charcoal is analyzed from temporal and spatial perspectives.

FOREST COMPOSITION AND PALEOENVIRONMENT

Examination of the distribution and species composition of wood charcoal contributes to the understanding of past forest composition. The most striking observation in the sampled proveniences is the patterning of wood charcoal assemblages associated with each cultural horizon. If the macroplant remains within these horizons are relatively in situ, as we have suggested, and these samples represent an adequate data set for examining past forest composition (as we have also suggested), than these patterning may correlate to past forest composition within these horizons. As has already been stated, pine is almost uniformly the dominant wood charcoal taxa in the Deptford components of both units. The proportion of pine in the Unit 3 Deptford horizons ranges from 75 to 100 percent of the identified wood charcoal (Table 20). Oak is the only specifically identified hardwood taxa identified in the Unit 3 Deptford component.

The proportion is likewise high (85.7 to 91.3%) within the shallower, presumably younger (50-70 cm bs) Deptford horizon of Unit 4. Like the Unit 3 Deptford samples, oak is the only identified hardwood found in the 50 to 70 cm below surface column samples. The proportion of pine in deeper Unit 4 Deptford deposits ranges decreases to 50 to 62.5 percent. Specifically identified hardwoods associated with these samples consists of red oak, white oak, indeterminate oak, and hickory.

Within Unit 3, the proportion of hardwoods in the identified wood charcoal assemblage is greater in the younger Cape Fear/Pee Dee horizons and the older Early/Middle Archaic horizons. Proportions of hardwoods found within the Cape Fear/Pee Dee horizon range from 40 to 60 percent and exclusively consist of oaks. With the exception of the 90 to 100 cm below surface sample, which consists of 100 pine, the proportions of hardwoods associated with the Unit 3 Archaic horizon range from 50 to 85 percent of the identified wood charcoal. Specifically identified hardwoods within the Unit 3 Archaic consist of red oak, indeterminate oak, pine, and ash.

The proportion of hardwoods found in the Cape Fear/Pee Dee horizons of Unit 4 are almost the mirror image of those of Unit 3. Hardwood proportions within this Unit 4 horizon are respectively 47.4 and 50 percent. Specifically identified hardwoods include oaks and hickories. The proportion of hardwoods within the proposed Indeterminate Archaic horizon of Unit 4 is 28.6 percent (exclusively pine). These proportions suggest that pines were more common in the local forests surrounding the site in the Deptford period. This may be due to land clearing practices associated with the postulated more intensive Deptford occupation and/or to a more xeric climate during this period. Minimally, the dominance of pine in the Deptford horizons at this site points to a pine-dominated forest in the immediate vicinity of both prehistoric sites in the Woodland period. The greater proportion of hardwoods in the younger Cape Fear/Pee Dee horizons points to a greater proportion of hardwoods in the local forest community during this period. The dominance of oaks is not surprising, given the oak hammock context of the site locality. The dominance of hardwoods within these Mississippian horizons is different from other sites examined by the authors at the PECR. The high proportion of hardwoods in the older Archaic horizons likewise points to a greater representation of hardwoods in the Archaic period local forest community. This pattern is mirrored in other Archaic-period wood charcoal assemblages from the PECR.

This pattern of pine dominated forests in the PECR Big Bay locality during the Woodland and Mississippian periods is supported by analysis of wood charcoal from four sites examined as part of Phase II testing of 20 sites conducted by Geo-Marine, Inc. in 1997 (Raymer 1998) and analysis of macroplant remains recovered by New South Associates during Phase II testing at sites 38SU56 and 38SU205 (Raymer 2000). Coniferous woods dominated the wood charcoal assemblages of three of the four sites from which wood charcoal specimens were identified (38SU215, 38SU178, 38SU179) in New South's 1998 analysis (Raymer 1998). Conifers were also dominant in three of four sampled contexts at Site 38SU232. Interestingly, hardwoods represented a greater proportion of the identified wood assemblage from one unit column sample at this site. Six hardwood taxa accounted for 18 percent of the charcoal in this unit. Seventy percent of the identified wood charcoal was either pine or indeterminate conifer. The proportion of hardwoods in the identified charcoal assemblage and the diversity of hardwood taxa increased with depth in this column sample. Indeed, hardwoods comprised a higher percentage of the total wood charcoal assemblage in the lower levels of all three Site 38SU232 column samples. The higher percentage and greater diversity of hardwood taxa found at depth at Site 38SU232 corresponded to the greater representation of nutshell noted in the lower levels of Unit 66, Site 38SU232, and Unit 51, Site 38SU51. The greater dominance of hardwoods in lower levels of these column samples is suggestive of a much greater percentage of hardwoods in the older, Archaic period forest at these Big Bay sites (Raymer 1998).

The dominance of pine in Woodland and younger deposits and higher density and greater diversity of hardwood taxa found in older, Early Archaic-age deposits is mirrored in analysis of macroplant remains recovered by New South Associates during Phase III data recovery at sites 38SU136/137 and 38SU141. Pine dominates the wood charcoal assemblages of Middle Woodland through Mississippian period features and column samples. Hardwood taxa and nutmast are much more common in Early Archaic period deposits at these sites. The 80-100 cm, site 38SU141 (53% of identified woods were hardwoods) and the 60-70 cm, site 38SU136/137 (32% hardwoods) horizons contained significantly higher percentages and greater diversity of hardwoods than other horizons at these sites. The ratios of hardwoods to conifers and ubiquities of identified woods also indicate the significant representation of hardwoods in these horizons. The ubiquity of hardwoods is 100 percent in the 60-80 cm (38SU136/137) and 60-100 cm (38SU141) horizons of these sites. There is also a greater diversity of hardwoods found at site 38SU136/137 in the Early Archaic horizon. Specifically identified woods in this horizon, which dates to approximately 9,000 B.P., include oaks, hickory, and hophornbeam. This is the only context in which this hardwood is found at the study sites.

Watts (1980) study of pollen cores from White Pond located near Elgin, South Carolina, found that this taxa was exclusively associated with the mesic deciduous forest that covered the Atlantic Coastal Plain during the Early Holocene epoch from 12,800 – 9,500 B.P. This forest consisted of about 30 percent hickories and beech, with significant presence of hophornbeam, sugar maple, hazel, and black walnuts. During the succeeding Hypsithermal epoch, which Watts dates from circa 9,500 to 6,000 B.P. at White Pond, the climate became much drier and warmer due to significantly higher temperatures. During this period of more xeric conditions, the forest cover of the Atlantic Coastal Plain shifted from a mesic hardwood forest to an oakdominated mixed oak/pine forest. By the end of the period, circa 6,000 B.P, the local ecology as evidenced by pollen cores from White Pond had transformed to essentially modern conditions. The oak-dominated mixed hardwood/pine forest changed to a modern southern pine forest with cypress, sweet gum, and blackgum as common associates (Watts 1980).

The Early Archaic wood charcoal assemblage found at the study site, like that of past investigations, indicates that the local paleoenvironment found in the project locality likely represented a transitional Early Holocene mesic deciduous/Hypsithermal mixed oak/pine forest circa 9,000 B.P. The significant presence of oaks and hickories with compressed growth rings associated with Early Archaic horizons at site 38SU136/137 offers convincing evidence of drought stress associated with the xeric conditions of the Hypsithermal in the project locality. Pine dominated wood charcoal assemblages from Deptford period horizons at the study site and other prehistoric sites studied by the author (Raymer 1998, 2000) amply attests to the replacement of these

forest associations by an essentially modern southern pine forest circa 6,000 B.P. The reappearance of a hardwood dominated forest in the current archaeobotanical analysis in the Mississippian period is unique among archaeobotanical studies conducted by the author at the PECR and may be related to the different icroenvironment of this site relative to those of Big Bay that have been studied in the past.

VII. RESULTS FROM PHASE I SURVEY AT SHAW AIR FORCE BASE

This chapter presents the results from an intensive cultural resources survey of three selected tracts at Shaw Air force Base (see Figure 2). All three sections consist of linear corridors that required the excavation of double transects spaced 30 meters apart. Shovel tests were excavated along each transect at 30-meter intervals. Section 1 was approximately 500-meters long and paralleled the northern bank of Long Branch. Section 2 was approximately 1000-meters long paralleled the southern bank of Long Branch. Sections 1 and 2 essentially formed a continuous corridor running along the length of Long Branch before terminating at Booth's Pond. Section 3 consisted of a 900 meter-long, east-west corridor located approximately 1000 meters south of Booth's Pond. Section 3 runs between a paved military road and an unnamed tributary of Long Branch. Shovel tests were conducted within Sections 1 and 3, however, Section 2 was completely inundated due to extensive flooding. A surface reconnaissance of this corridor was all that was permitted.

The Phase I survey of selected tracts at Shaw AFB resulted in the discovery of 1 new site (38SU299) and a revisit of a previously recorded site (38SU250). Individual site information is summarized below. State site forms and artifact data for the sites documented by this project are presented in the Appendices.

38SU299 (FIELD SITE 1)

USGS 7.5 Quadrangle: Sumter West

Drainage: Long Branch Physiography: Floodplain Elevation: 61 m (205 ft) AMSL

Site Dimensions: 30 x 20 meters (98 x 66 ft)

Ground Surface Visibility: 0%

Cultural Affiliation(s): Early to Middle Woodland

Primary Site Type/Function: Prehistoric lithic-ceramic scatter/encampment

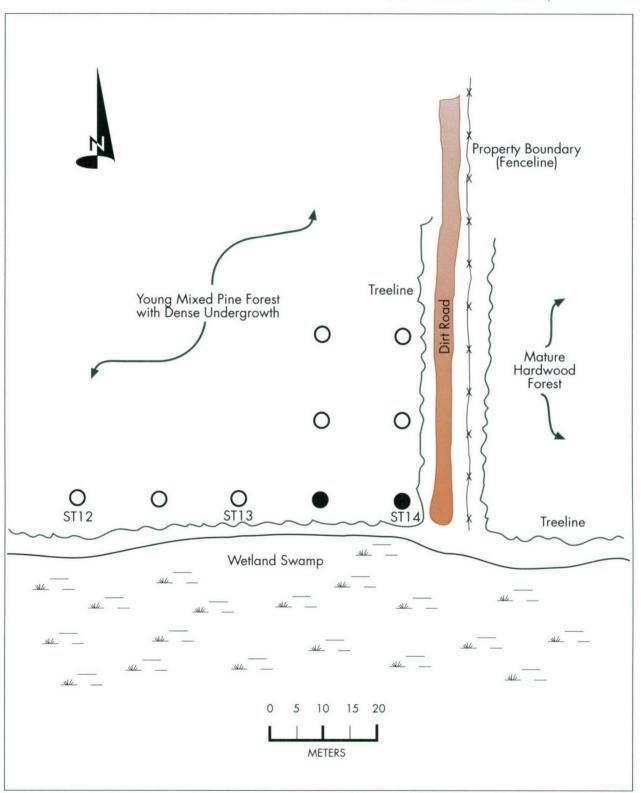
Site Condition: Less than 50% disturbed

NRHP Recommendations: Potentially eligible

Site 38SU299 (Field Site 1) was located within Section 1 and consists of a small, moderate-density scatter of prehistoric lithic and ceramic artifacts situated on the northern bank of Long Branch (Figure 17). Just east of the site a dirt road and an adjacent fence-line form the Shaw AFB property boundary. Site vegetation consists of young mixed pine and hardwood forest with moderate to abundant secondary undergrowth. Immediately across the property line, vegetation consists of mature hardwood forest with minimal to no understory. 38SU299 measures 30 by 20 meters and required the excavation of eight shovel tests, two of which (25%) produced positive results. The general soil profile at the site consisted of a 20 to 23 cm thick layer of grayish brown loamy sand (Stratum I) overlying what appears to be a 15 to 20 cm thick buried midden and/or occupation surface designated Stratum II. This soil stratum consists of a 10 to 12 cm thick layer of dark grey organic loam with moderate charcoal flecking. Stratum II was also the only artifact-bearing layer at the site. Underlying Stratum II was a 30 to 40 cm thick layer of wet yellowish brown fine sand (Stratum III).

The artifact assemblage (n=6) consists of a single projectile point and five prehistoric ceramic sherds. The lithic collection consisted of a single point projectile point manufactured from rhyolite. Although its overall

Figure 17 Site Number 38SU299, Sketch Plan



shape is pentagonal, the point appears to be a resharpened Yadkin Triangular. Resharpening 'on the haft' can often result in recurvate lateral edges, which are sometimes mistaken for true pentagonal point forms. In a comparison with a clearly identified Yadkin Triangular from Field Site 2, a strong similarity was observed in general morphology and flaking technique. Yadkin Triangulars are generally associated with Early and Middle Woodland contexts in the Southeast. The prehistoric ceramic collection consists of two generalized Woodland Plain sherds, 1 Pee Dee rim sherd, and 1 sherdlet. The entire collection was recovered from the layer of dark midden-like soil layer designated Stratum II.

Overall, the prehistoric assemblage suggests at minimum a seasonal habitation of this floodplain location. The presence of ceramics and diagnostic lithics with a buried intact cultural deposit indicates good site integrity and a good potential for the presence of other cultural features. As such, site 38SU299 is recommended potentially eligible for listing on the National Register of Historic Places.

38SU250 REVISIT (FIELD SITE 2)

USGS 7.5 Quadrangle: Sumter West

Drainage: Long Branch Physiography: Ridge top Elevation: 70 m (230 ft) AMSL

Site Dimensions: $60 \times 60 \text{ m} (197 \times 197 \text{ ft})$

Ground Surface Visibility: 75 - 100% on road surface

Cultural Affiliation(s): Middle/Late Archaic transition, Early to Middle Woodland

Primary Site Type/Function: Prehistoric encampment/workstation

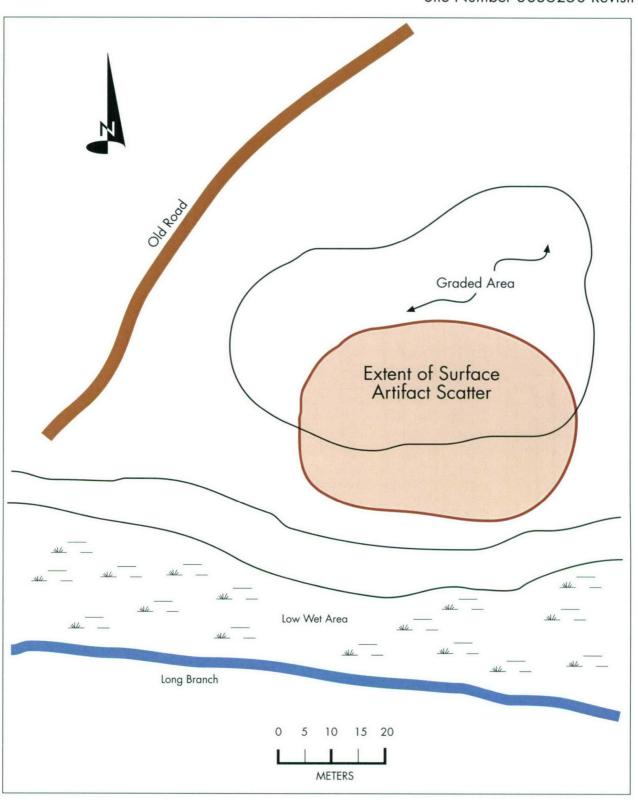
Site Condition: More than 50% disturbed NRHP Recommendations: **Ineligible**

38SU250 consists of a low to moderate-density surface scatter of prehistoric artifacts situated on a cleared ridgetop overlooking Long Branch (Figure 1). The site is located outside the project area and was inadvertently encountered during the present survey. The site was previously recorded during a Phase I survey of Section I of the Long Branch Tract. The previous site investigation documented Archaic and Woodland prehistoric site components and a $19^{th}/20^{th}$ century historic component. The site measured 340×160 m materials were recovered from both shovel testing and surface collection. 38SU250 was recommended ineligible for nomination to the NRHP.

The present revisit of 38SU250 involved limited surface artifact recovery. Artifacts were recovered from within a 60 x 60 meter area. Site vegetation was comprised primarily of sparse grasses and woody shrubs with mixed pine and hardwoods along the surrounding sideslope. The area appears to have been former location of an historic homestead given the large collection of 19th and 20th century domestic refuse recovered during the initial survey. Prehistoric deposits were likely exposed when the homestead was cleared and graded. The present artifact collection (n=10) consisted two projectile points, two flakes, and six sherds. Diagnostic artifacts include one Sykes/White Springs Stemmed point (Middle and Late Archaic) made from an unidentified weathered metavolcanic and one Yadkin Triangular (Early and Middle Woodland) manufactured from flow-banded rhyolite. The ceramic collection consisted of four Deptford Check Stamped sherds and two Santee Plain sherds. Overall, the assemblage represents three prehistoric components including Late Woodland/Mississippian and Middle Woodland ceramic phase occupations and a non-ceramic Middle or Late Archaic occupation.

Despite the limited nature of the site revisit, the general disturbed nature of the site area does not indicate a high degree of research potential. We therefore agree with the initial recommendation that 38SU250 should be considered ineligible for nomination to the NRHP (Kreisa et al. 1997).

Figure 18 Site Number 38SU250 Revisit



VIII. ARCHAEOLOGICAL TESTING AT SITE 38SU58

INTRODUCTION

Site 38SU58 was originally identified by CRHS, Inc. (Brown et al. 1983) and was later revisited by the South Carolina Institute of Anthropology and Archaeology in 1996 (Kreisa et al. 1996). The site is located on a dune formation overlooking a small, unnamed tributary of Brunson Swamp. Site vegetation consists of mixed oak-pine forest with sparse grasses and woody shrubs. Prior to this investigation the site was known only from surface artifact collections from the transmission line corridor and the two adjacent utility roads that intersect the landform. Material, both observed and collected, from the most recent survey (Kreisa et al. 1996) recognized diagnostic Middle Woodland Yadkin ceramic and lithic artifacts. However the presence of reed punctate and appliqué rim treatments from the assemblage also indicates minor Early Woodland Refuge phase and Mississippian Pee Dee phase components. The site was recommended as potentially eligible for inclusion to the NRHP based on surface artifact density and the recovery of several diagnostic artifacts including an unusual engraved slate pendant.

SHOVEL TESTING AND SURFACE COLLECTION

The first stage of Phase II investigation at 38SU58 included systematic surface collection and the excavation of close interval shovel testing on a 10-meter grid. Based on this procedure the site measured 110 x 80 m and required the excavation of fifty-nine shovel tests of which eighteen (31%) produced positive results (Figure 19). Shovel testing and surface artifact collection revealed that site artifact density was highest in the area immediately north of Brunson Swamp. Four smaller artifact clusters were also identified just north of the main concentration (Figure 20).

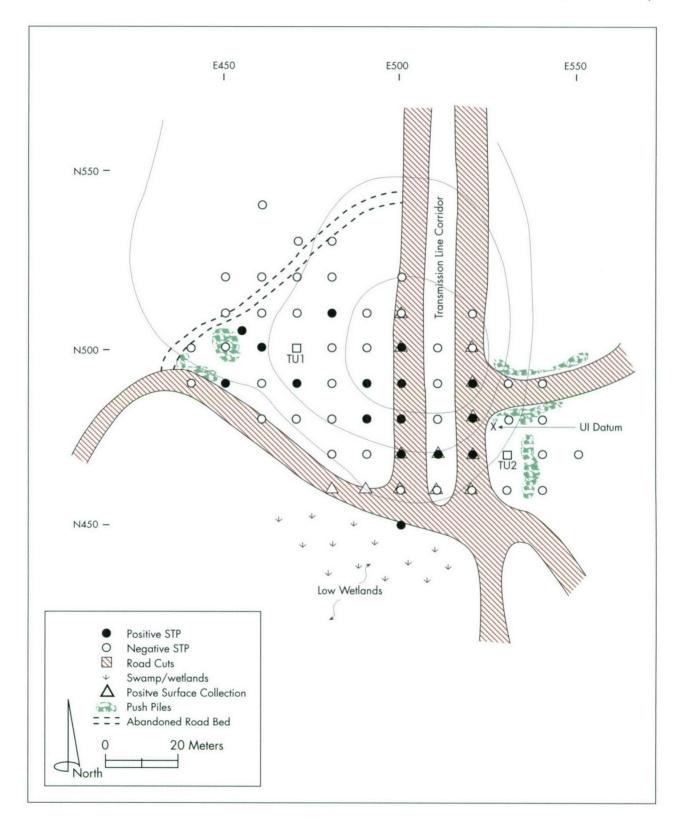
The artifact collection from the first stage of the investigation included 74 ceramic sherds and 42 lithics. Lithic material was comprised almost exclusively of late stage reduction debris although a single Late Woodland/Mississippian Triangular projectile point was identified. Artifact raw material was dominated by quartz and chert with lesser quantities of rhyolite and orthoquartzite. The ceramic assemblage largely consists of Deptford and Woodland series ceramics, which are generally associated with late Early and Middle Woodland sub-period occupations. Minor Thom's Creek (Late Archaic), Refuge (Early Woodland), and Pee Dee (Mississippian) components were also recognized.

It should be noted that artifact distributions shown in the road and right-of-way (ROW) portions of the site represent artifacts collected from within a 5-meter radius of each grid point or recovered from within the highly disturbed upper strata. Both surface and subsurface material data sets were used to generate ceramic and lithic density maps. So while artifact discard and/or occupational intensity may have peaked in this portion of the site, it is more likely due to the exposure of the shallow Woodland and Mississippian deposits caused by construction of the transmission line corridor.

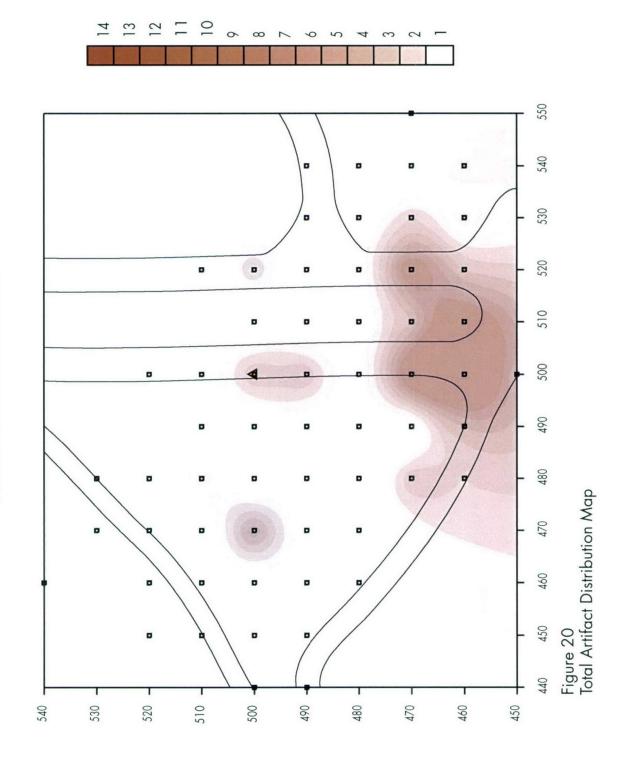
TEST UNIT EXCAVATION

Two site areas contained a relatively large quantity of artifacts while exhibiting some degree of depositional integrity. The first was centered at grid coordinate N500 E470, the second at N470 E530. These areas

Figure 19 Site Number 38SU58, Sketch Map



38SU58 Total Artifact Distribution



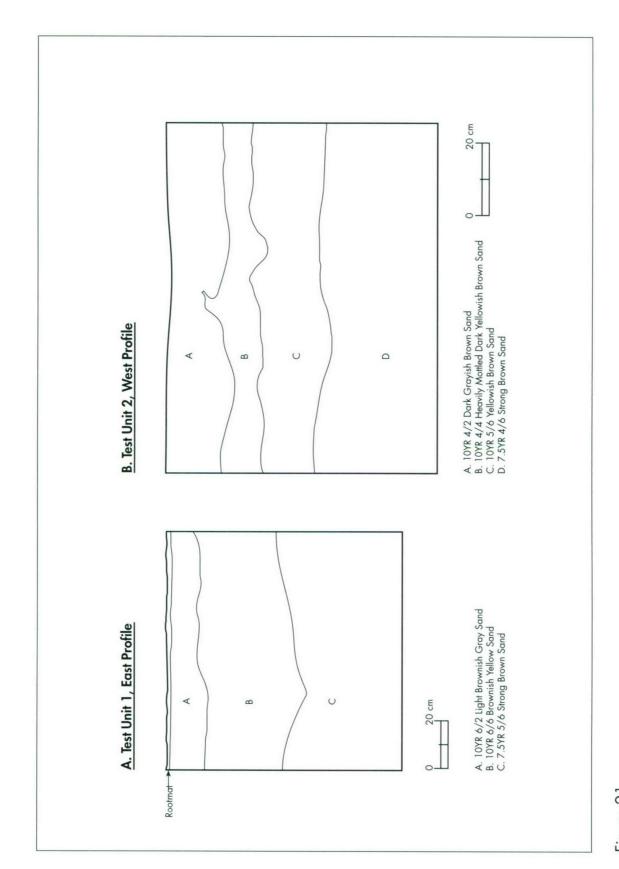


Figure 21 Soil Profiles for Test Unit 1 and 2

appeared to be the only intact portions of the main artifact cluster and in each of these areas a 1×1 meter test unit was excavated in order to further evaluate occupational characteristics and depositional integrity.

TEST UNIT 1

Test Unit 1 was located in the northwestern quadrant of the site. The unit's location was established to investigate the ceramic and lithic concentration in Shovel Test N500 E470, which contained three sherds and four flakes. A datum was established 10 cm above surface in the northeast corner of Test Unit 1. The unit was excavated in ten, 10-cm arbitrary levels to a depth of 110 cm below datum. The general soil profile encountered during the excavation of Test Unit 1 consisted of a 10 to 15 cm thick layer of light brownish gray (10YR 6/2) fine sand (Stratum II) overlying a 35 to 40 cm thick layer of brownish yellow (10YR 6/6) sand (Stratum III). Finally, Stratum III consists of a 40 to 52 cm thick layer of strong brown (7.5YR 5/6) sand.

Test Unit 1 profile drawing is presented in Figure 19: A. Table 21 summarizes the distribution of artifact types recovered from Test Unit 1 by level. Overall artifact recovery was moderate in Test Unit 1 and consisted of almost equal quantities of ceramic and lithic material. Based on the vertical distribution of artifacts, two distinct artifact concentrations were present. The first occurred within Levels 3 and 4 (Stratum II) and is largely composed of Woodland and Deptford series ceramics with Woodland 2 Plain ceramics comprising the largest percentage (46%) followed by various Deptford 2 variants (29%) and Woodland 2 Indeterminate (16%). It is important to note that in earlier investigations within the PECR, Woodland 1 and Woodland 2 plain wares were consistently associated with Deptford series ceramic contexts (Cable 2001). This suggests a single component Middle Woodland Deptford phase deposit in levels 3 and 4.

The second artifact concentration occurred in Levels 6, 7, and 8 (Stratum III). This deposit is comprised almost exclusively of lithic material. A single Woodland 2 sherd was recovered in level 6 but as the overall lithic concentration peaks in level 8, the presence of a sherd in upper portion of the concentration does not indicate an extensive intrusion of the overlying Deptford deposit. No lithic diagnostics were recovered that could assign cultural affiliation for this component but at this depth, it is probably associated with a Middle or Early Archaic occupation. Lithic material included, in order of frequency from high to low; quartz, chert, and orthoquartzite. Debitage profiles indicate activities involving late stage reduction and tool maintenance. In general, limited activity sets such as this are indicative of short-term logistically oriented occupations.

Table 21	38SU58 Test Unit	Artifact Types By Soil	Strata and Excavation Level.	

Stratum	1	II	II	11	II	III	Ш	III	111	III	Totals
Levels	1	2	3	4	5	6	7	8	9	10	
Max. Depth (cmbs)	10	20	30	40	50	60	70	80	90	100	
CERAMICS						Acting the					
Woodland (fp)Plain	0	1	0	0	0	0	0	0	0	0	1
Woodland 2 Plain	0	0	8	3	1	1	0	0	0	0	13
Woodland 2 Indet.	0	0	0	4	0	0	0	0	0	0	4
Deptford 2 decorated	0	0	0	1	0	0	0	0	0	0	1
Deptford 2 Stamped	0	0	0	1	0	0	0	0	0	0	1
Deptford 2 Fabric Imp.	0	0	0	1	0	0	0	0	0	0	1

Shatter/Chunk	0	0	0	0	0	2	0	1	0	0	3
	_						0	1	_	-	3
Interior Flake	0	0	0	0	0	0		0	0	0	
Tertiary Flake	0	0	0	1	1	3	6	11	3	0	25
Flake Frag.	0	0	0	0	0	1	1	1	0	0	3
Sub-totals	0	0	0	1	1	6	8	13	3	0	32
Grand Totals	0	1	8	17	2	7	8	13	3	Sept.	59

TEST UNIT 2

Test Unit 2 is located in the southeastern portion of the site. The unit's location was established to investigate the ceramic and lithic concentration in Shovel Test N470 E530, which contained one sherd and three flakes. A datum was established 10 cm above surface in the northeast corner of Test Unit 2. The unit was excavated in seven, 10-cm arbitrary levels to a depth of 78 centimeters below datum. The general soil profile encountered during the excavation of Test Unit 1 consisted of a 12 to 20 cm thick layer of dark grayish brown (10YR 4/2) sand (Stratum I) overlying a 6 to 12 cm thick layer of heavily mottled dark yellowish brown (10YR 4/4) sand (Stratum II). Stratum II consisted of a 15 to 20 cm thick layer of yellowish brown (10YR 5/6). Finally, Stratum III consists of a 30 to 35 cm thick layer of strong brown (7.5YR 5/6) sand.

Test Unit 2 profile drawing is presented in Figure 21: B. Table 22 summarizes the distribution of artifact types recovered from Test Unit 2 by level. Artifact recovery from Test Unit 2 consisted of eight sherds and three lithics. All material from Unit 2 was recovered in levels 3 and 4. Again, Woodland 2 Plain sherds dominate the ceramic collection although a single Santee 2 Simple Stamped sherd was recognized. The lithic collection consists of one cortical shatter fragment, one interior flake, and one tertiary flake. While much lower in overall density compared to Test Unit 1, the depth at which materials were encountered in Test Unit 2 confirm that portions of the Middle Woodland component appear at approximately 30 to 40 cm below surface. Additionally, previously unknown Late Woodland/Mississippian Santee Phase occupation is recognized slightly overlying the main cluster of Woodland sherds. This sherd is probably associated with small Late Woodland/Mississippian Triangular point found on the road surface. No underlying Archaic component was identified in this portion of the site.

RECOMMENDATIONS

Located on a small sand ridge overlooking a small drainage, site 38SU58 appears to have been the focus of repeated occupations beginning in the Early/Middle Archaic and extending into the Mississippian period. Six ceramic components were identified including Thom's Creek, Refuge, Deptford, Santee and Pee Dee. A small non-diagnostic lithic scatter occupation was also encountered in the northwestern portion of the site. This scatter is most likely associated with an ephemeral Early and/or Middle Archaic occupation. While the majority of the site has been heavily impacted from road and utility corridor construction, portions of the Early/Middle Archaic and Deptford deposits appear to have retained some degree of integrity. These areas are located along the northwestern and southeastern periphery of the site. The remaining components are known only from surface collections or from the highly disturbed and mixed upper strata. Given the extensive nature of these post depositional disturbances, we believe the site offers limited research potential such that further work would not likely yield significant new information. Therefore, we recommend site 38SU58 ineligible for inclusion to the NRHP.

Table 22. 38SU58 Test Unit 2 Artifact Types By Soil Strata and Excavation Level.

Stratum	1	1/11	11	11/111	III	111	III	
Levels	1	2	3	4	5	6	7	Totals
Max. Depth (cmbs)	10	20	30	41	52	62	72	Iorais
CERAMICS								
Woodland 2 Plain	0	0	1	6	0	0	0	7
Santee 2 Simple Stamped	0	0	1	0	0	0	0	
Sub-totals	0	0	2	6	0	0	0	8
LITHICS								
Cortical Shatter	0	0	0	1	0	0	0	1
Interior Flake	0	0	0	1	0	0	0	1 1
Tertiary Flake	0	0	0	1	0	0	0	
Sub-totals	0	0	0	3	0	0	0	3
Grand Totals	0	0	2	9	0	0	0	11

IX. ARCHAEOLOGICAL TESTING AT 38SU222

INTRODUCTION

Site 38SU222 was originally identified by the South Carolina Institute of Anthropology and Archaeology (Kreisa et al. 1996). The site is located on an east-west trending sand dune/bench adjacent to a small, unnamed tributary of Brunson Swamp. Intersecting the landform is a network of access roads and a transmission line right-of-way (ROW). Site vegetation consists of sparse grasses and woody shrubs within the utility corridor surrounded by mixed oak-pine forest with moderate understory. Construction of the roads and utility corridor has resulted in the extensive exposure of the archaeological deposits along the long axis of the landform. Like 38SU58, which is located approximately 80 m to the south, the initial survey defined the site on the basis of a dense surface scatter of artifacts found along the road and ROW. The Phase I artifact collection was limited but documented Early and Middle Woodland ceramic components as well as a baked clay object, lithic debitage, and tools. Based on the observed artifact density, the site was recommended as potentially eligible for inclusion to the NRHP.

SHOVEL TESTING AND SURFACE COLLECTION

Stage I of Phase II investigations at 38SU222 included the excavation of close interval shovel tests for site boundary delineation (Figure 22). Based on the shovel testing procedure the site measured $270 \times 120 \text{ m}$ and required the excavation of 186 shovel tests of which forty-seven (25%) produced positive results. The site was actually much larger and extended further west along the landform than was indicated by the survey investigation. However, the original Phase I surface scatter extended approximately 55 m further east than was indicated by the Phase II investigation. When combined, an effective site dimension is $325 \times 120 \text{ m}$.

The general soil profile encountered during the Phase II shovel testing procedure and test unit excavations consisted of a 10 to 20 cm thick layer of gray (10YR 6/1) fine sand (Stratum II) overlying a 8 to 12 cm thick layer of brown (10YR 5/4) sand (Stratum II). Underlying Stratum II was a 10 to 40 cm thick layer of yellowish brown (10YR 5/4) (Stratum III). Finally, Stratum IV consists of a 30 to 60 cm thick layer of strong brown (10YR 6/6) sand.

A large artifact collection (n=402) was recovered from the first stage of the investigation. The lithic collection was primarily comprised of debitage along with relatively few lithic tools and diagnostics. Tools identified included one Taylor Side Notched point, five bifaces, three cores, one perforator, one abrading stone, and one pitted mano or anvil-stone. Principal ceramic components included Deptford, Cape Fear, Santee, and Pee Dee series ceramics. Minority components consisted of Thom's Creek and Refuge series ceramics.

Artifact density maps generated using material collected from both surface collection and shovel testing (Figure 23-25) revealed distinct artifact clustering along the entire length of bench landform. Artifact concentrations appear higher in the southern portion of the site due to the exposure of deposits within the transmission-line corridor. Within this area surface artifacts were collected from within a 5 m radius of each grid coordinate. This was is addition to the standard shovel testing procedure, which in general produced relatively few artifacts. In an effort to show the distribution of surface material, these data were incorporated into the overall mapping strategy.

In an attempt to isolate occupational clusters, contour distribution maps were generated to show the distribution of ceramics by component (Figures 26-31). These maps show distinct concentrations of Woodland, Deptford, Cape Fear, Santee, and Pee Dee ceramic components, while Thom's Creek and Berkeley sherds are represented by single isolated occurrences. Additionally, a raw material distribution map was generated for chert (Figure 32) as the only lithic diagnostic recovered from the initial phase of the testing consisted of a Taylor Side-Notched (Early Archaic) manufactured from coastal plain chert. Unfortunately the Taylor point was found along the road surface at grid coordinate N530/E500. However, a discrete clustering of chert is present and centered at shovel test N530/E490. Artifacts found in this shovel test were deeply buried and included coastal plain chert debitage and one quartz pitted anvil-stone, an assemblage that appears to confirm the presence of an intact Early Archaic deposit.

TEST UNIT EXCAVATION

While the southern end of the site is heavily disturbed, the majority of the site including the central and northern portion remains intact. As such, the majority of the test units were completed in these areas. Six test units were excavated at 38SU222 including three 1 x 1 m test units and three 1 x 2 m test units. Test Unit 2 was subsequently expanded with a 1 x .50 m unit in order to fully expose a partial pot burst found along the western edge of the original unit. Additionally, Test Unit 3 will not be described below. Test Unit 3 was established within the transmission line corridor to investigate a possible cultural feature encountered during shovel testing. However, upon unit excavation dark mottled soil with modern trash and a distinct gasoline oder was encountered at 25 cmbs and the unit was abandoned.

TEST UNIT 1

Test Unit 1 was located in the central portion of the site at grid coordinate N580/E470. The unit was excavated in order to investigate a high concentration of artifacts found in a shovel test containing five Cape Fear Simple Stamped sherds. Unit dimensions measured 1 x 2 m and a datum was established 10 cm above surface in the northeast corner. The unit was then excavated in eight arbitrary levels to a depth of 77 cm below datum. The general soil profile encountered during unit excavation consisted of a 5 to 15 cm thick layer of loose light gray (10YR 7/1) sand (Stratum I) overlying a 5 cm thick layer of dark yellowish brown (10YR 3/4) sand (Stratum II). Stratum III consisted of a 20 to 25 cm thick layer of mottled yellowish brown (10YR 5/6) sand before grading into a yellowish brown (10YR 6/6) sand (Stratum IV). A profile drawing for Test Unit 1 is presented in Figure 33: A and Table 23 summarizes the distribution of artifact types recovered from Test Unit 1 by level.

Artifact recovery from Test Unit 1 was low and consisted of both prehistoric lithics and ceramics. Two artifact concentrations were identified. The first occurring between levels 2 and 3, the second in level 5. Levels 2 and 3 contained a diverse collection of Woodland, Deptford, Cape Fear, Santee, and Pee Dee ceramics. Two additional Cape Fear Sherds were recovered from Test Unit 1 bringing the total number of Cape Fear series sherds to seven when those from the shovel test are included. Overall, Deptford and Woodland series sherds and in particular Deptford Cord Marked sherds dominate the ceramic collection, while Deptford Check Stamped and Fabric Impressed sherds occur in smaller quantities. Collectively, these sherds represent a substantial Middle Woodland sub-period occupation. The remaining Santee and Pee Dee components were each represented by a single sherd reflecting relatively lower intensity activities at least in this portion of the site during the subsequent Late Woodland and Mississippian sub-periods.

Figure 22 Site 38SU222 Sketch Map

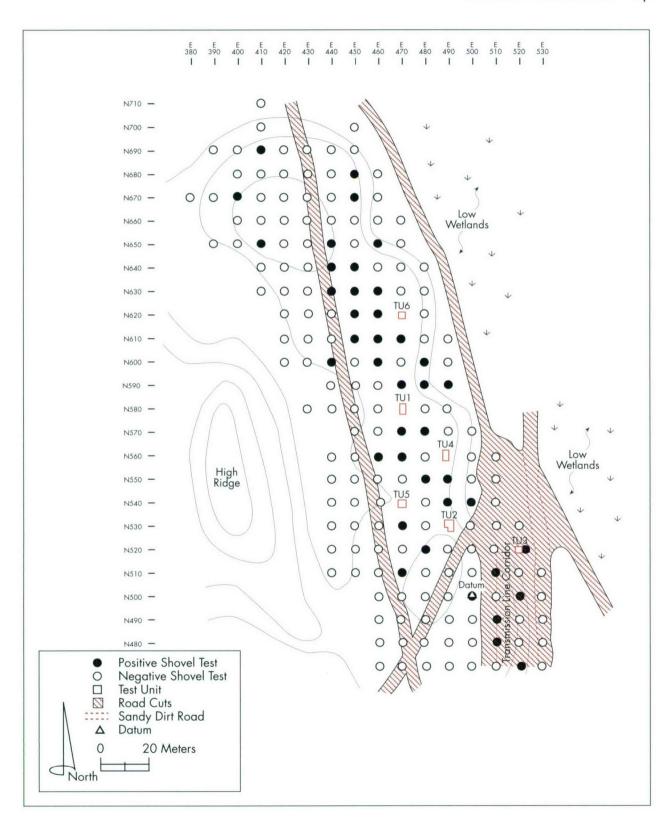


Figure 23 Total Artifact Distribution Map

38SU222 Total Artifact Distribution

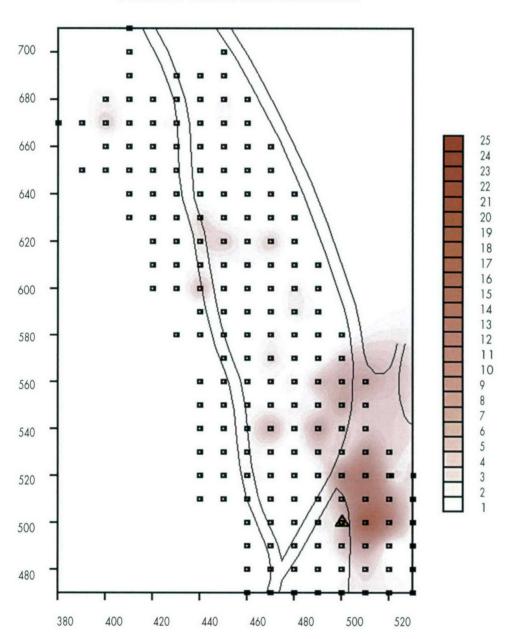
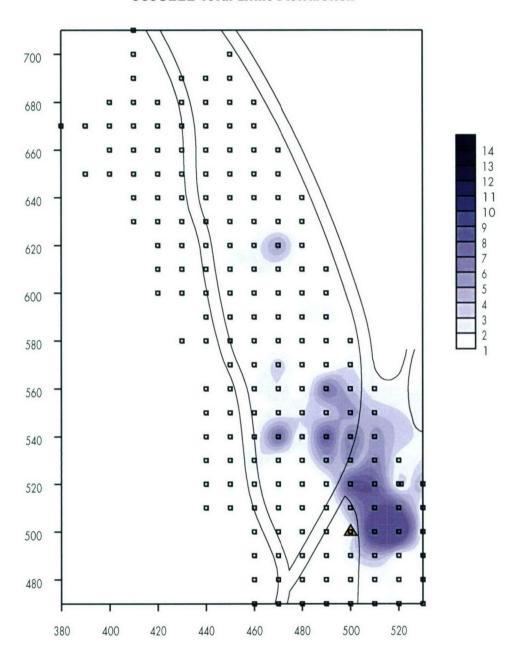


Figure 24 Total Lithic Distribution Map

38SU222 Total Lithic Distribution



100

38SU222 Total Ceramic Distribution

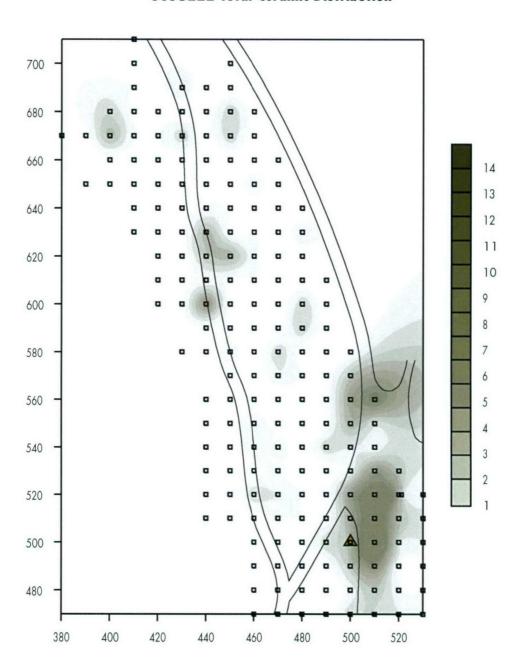


Figure 26 Total Thom's Creek Ceramic Series Distribution Map



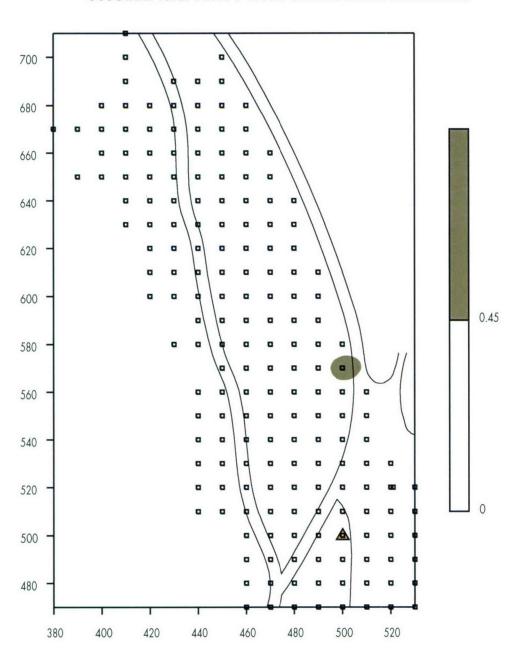


Figure 27 Total Woodland and Deptford Series Distribution Map



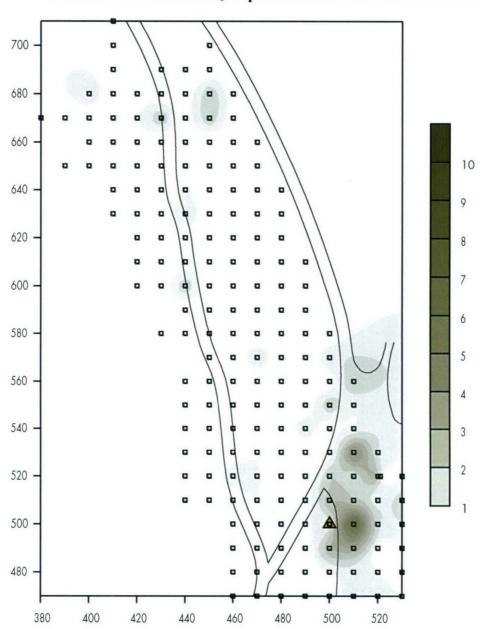


Figure 28 Total Berkeley Series Distribution Map



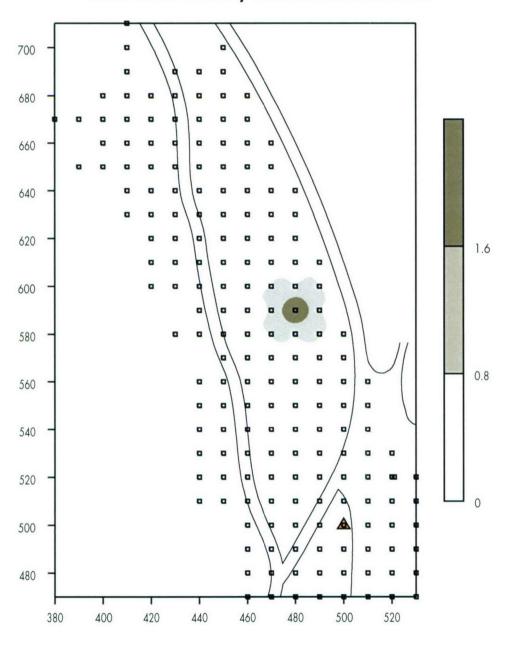


Figure 29 Total Cape Fear Series Distribution Map



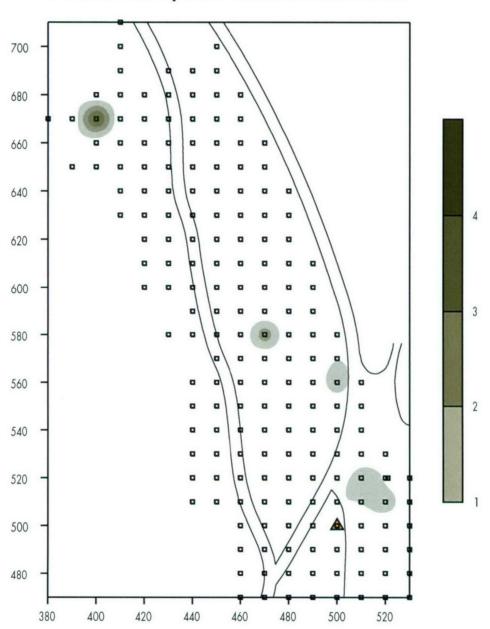


Figure 30 Total Santee Series Distribution Map



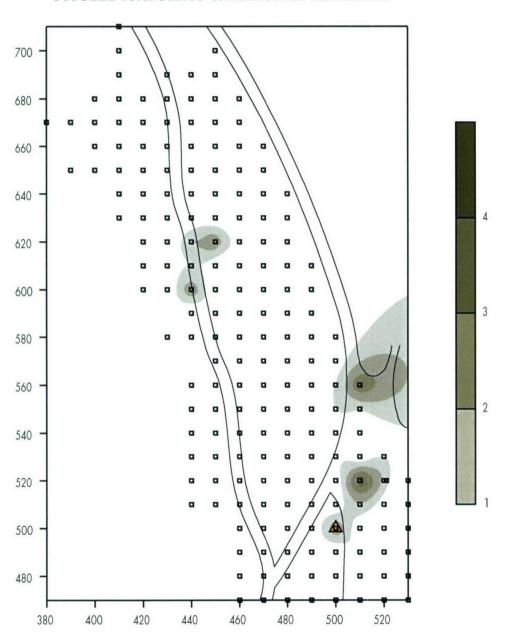


Figure 31 Total Pee Dee Series Distribution Map



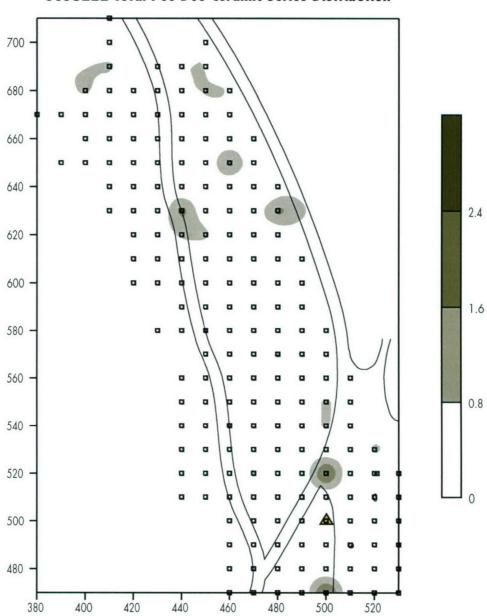
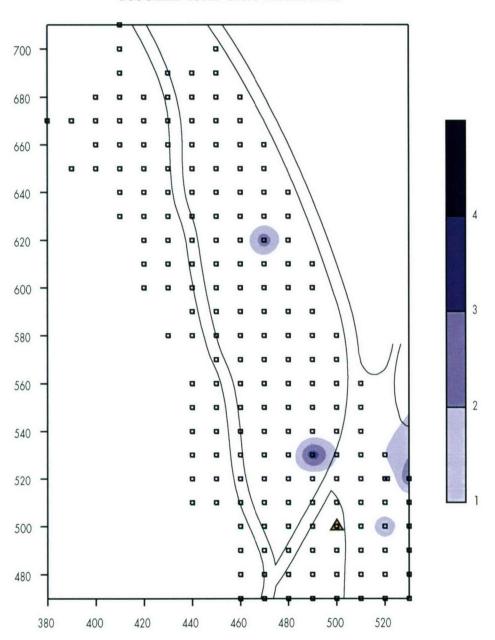


Figure 32 Total Chert Distribution Map





Two prehistoric lithic concentrations were present and consist entirely of debitage and FCR. The first is small debitage cluster in level 3, while the second is comprised of ten small fragments of FCR in level 6. No lithic diagnostics of tools were recognized so it is uncertain the cultural affiliation of these materials. However, the debitage concentration in Level 3 is probably associated with either the Deptford or Cape Fear components given the relatively higher proportions of these sherds at this level.

TEST UNIT 2

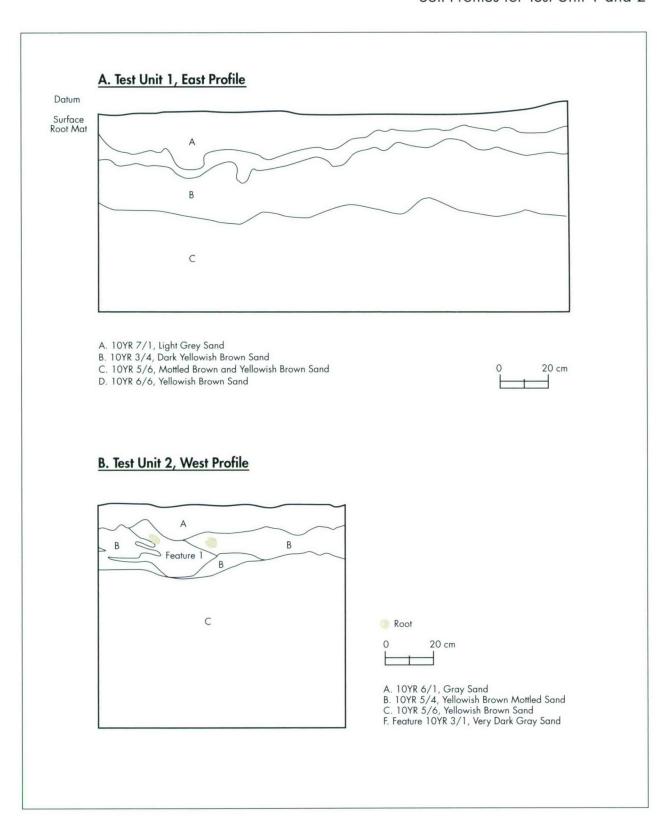
Test Unit 2 was located on the edge of the bench landform adjacent to the transmission-line corridor. The unit was excavated in order to investigate the lithic concentration found in Shovel Test N530/E490, which contained four Allendale chert flakes and one quartz pitted anvil-stone. Unit dimensions initially measured 1 x 2 m, but the unit was later expanded with a 1 x .50 m along the unit's eastern wall. Unit 3 was excavated in nine arbitrary levels to a maximum depth of 100 cm below datum. The general soil profile encountered during unit excavation consisted of a 10 to 15 cm thick layer of gray (10YR 6/1) sand (Stratum I) overlying a 10 to 30 cm thick layer of mottled yellowish brown (10YR 5/4) sand (Stratum II). Stratum III consisted of a 60 to 70 cm thick layer of yellowish brown (10YR 5/6) sand. A profile drawing is presented in Figure 33: B and Table 24 summarizes the distribution of artifact types recovered from Test Unit 2 by level.

Table 23. 38SU222 Test Unit 1 Artifact Types By Soil Strata and Excavation Level

Stratum	1	11/111	III	III	III	IV	IV	IV	
Levels	1	2	3	4	5	6	7	8	
Max. Depth (cmbs)	10	15	25	35	45	55	65	75	Totals
CERAMICS		TV-							
Pee Dee 2 Indet. Stamped.	0	0	0	1	0	0	0	0	1
Santee 2 Simple Stamped	0	0	1	0	0	0	0	0	1
Cape Fear Simple Stamped	0	0	0	1	0	0	0	0	
Cape Fear Fabric Impressed	0	0	0	1	0	0	0	0	
Deptford 1 Check Stamped	0	0	2	0	0	0	0	0	2
Deptford 1 Fabric Impressed	0	0	0	1	0	0	0	0	1
Deptford 1 Cord Marked	0	0	6	0	0	0	0	0	6
Woodland 1 Indet.	1	0	2	0	0	0	0	0	3
Woodland 2 Indet.	0	0	0	0	0	1	0	0	
Sub-totals	1	0	11	4	0	1	0	0	17
LITHICS						27003			
Primary Flake	0	0	1	0	0	0	0	0	
Tertiary Flake	0	0	4	1	0	0	0	0	5
Flake Frag.	0	0	0	1	0	0	0	0	1
FCR	0	0	0	0	2	10	0	0	12
Sub-totals	0	0	5	2	2	10	0	0	19
Grand Totals		0	16	6	2	11.	0	0	36

Artifact recovery from Test Unit 2 was low to moderate. A single ceramic concentration was identified between levels 2 and 4, although the densest concentration of sherds occurred in level 3. Unfortunately, little

Figure 33 Soil Profiles for Test Unit 1 and 2



component separation could be discerned as Woodland, Deptford, Santee, and Pee Dee series ceramics all appear to be compressed into a single mixed horizon in this location. However, a small pit-like feature encountered between 23 to 42 cmbd contained the entire collection of eight Cape Fear Simple Stamped sherds suggesting a degree of integrity for this Middle/Late Woodland component. The feature also contained one Santee Simple Stamped sherd, five sherdlets, eight flakes, and six small bone fragments. The presence of a single Santee Simple Stamped sherd from Feature 1 is of particular importance as this co-occurrence offers supporting evidence for a cultural continuance of simple stamping traditions from Cape Fear to later Santee phases. As detailed in the ceramic analysis chapter, paste composition is the only attribute distinguishing Cape Fear and Santee Simple Stamped wares. This data suggests that perhaps both simple stamped varieties characterize the Berkeley II to Santee I phase transition.

The vertical distribution of prehistoric lithics reveals distinct lithic concentrations in both level 3 and 6. The first was encountered in the third Strata and consists exclusively of lithic debitage from a wide variety of lithic raw materials. Like the ceramic collection from level 3, the diversity in lithic raw materials reflects a similar focused reuse of this area. On the other hand, raw material diversity in deeper lithic concentration (level 6) is low and is dominated by Allendale chert. The initial justification for excavating this unit was the presence of deeply buried lithic material from a shovel test and the surface recovery of a Taylor Side Notched point. Artifacts from the shovel test were of sufficient depth to indicate the presence of a Late Early Archaic deposit. The unit recovery of a large assemblage of chert debitage between 60 and 70 cmbs (Stratum IV) appears to confirm the presence of an occupation horizon and possibly a discrete lithic activity area, given the overall assemblage. Although no lithic diagnostics were actually recovered from this level, the surface discovery of the chert Taylor point and the discrete concentration of chert debitage at this depth conform to Early Archaic trends in raw material usage in the Upper Coastal Plain. The recovery of a pitted anvil stone from the shovel test would reflect activities related to either food and lithic processing. The occurrence of the Taylor point on the surface illustrates that the site has been subject to some disturbance, possibly from bioturbation.

Table 24. 38SU222 Unit 2 Artifact Types By Soil Strata and Excavation Level

Stratum	1/11	1/11	III	III	III/IV	IV	IV	IV		MATERIAL PROPERTY.
Levels	1	2	3	4	5	6	7	8	9	7 11 130
Max. Depth (cmbs)	4	14	24	39	54	64	74	84	94	Totals
CERAMICS					President Control					
Pee Dee 2 Indet.	0	1	1	0	0	0	0	0	0	2
Pee Dee 2 Indet. Dec.	0	0		0	0	0	0	0	0	0
Pee Dee 2 Indet. Stamped.	0	1		0	0	0	0	0	0	
Pee Dee 2 Plain	0	0		0	0	0	0	0	0	0
Santee 2 Simple Stamped	0	1	2	0	0	0	0	0	0	3
Cape Fear 1 Simple Stamped	0	0	3	0	0	0	0	0	0	3
Cape Fear 2 Simple Stamped	0	0	5	0	0	0	0	0	0	5
Cape Fear 1 Plain	0	0	1	0	0	0	0	0	0	
Cape Fear Fine Cord Marked	0	0	0	1	0	0	0	0	0	514
Deptford 1 Fabric Impressed	0	1	0	0	0	0	0	0	0	1
Woodland 1 Indet.	0	1	4	1	0	0	0	0	0	6

Stratum	1/11	1/II	III	III	III/IV	IV	IV	IV		
Levels	1	2	3	4	5	6	7	8	9	
Max. Depth (cmbs)	4	14	24	39	54	64	74	84	94	Totals
CERAMICS										
Woodland 2 Indet.	0	0	1	0	0	0	0	1	0	2
Woodland 2 Indet stamped	0	0	2	0	0	0	0	0	0	2
Sherdlet	1	1	6	0	0	0	0	0	0	8
Sub-totals	0	6	25	2	0	0	0	1	0	34
LITHICS										
Primary Flake	0	0	1	0	0	0	0	0	0	
Secondary Flake	0	0	3	0	0	1	0	0	0	4
Tertiary Flake	0	1	6	0	0	13	3	0	0	23
Flake Frag.	0	0	5	0	0	0	0	0	0	5
Shatter/Chunk	0	0	3	0	0	0	0	0	0	3
Cortical Shatter	0	1	3	0	0	0	0	0	0	3
FCR	0	0	1	0	0	0	0	0	0	1
Quartz Cobble	0	0	0	0	0	1	0	0	0	
Sub-totals	0	2	22	0	0	15	3	0	0	30
Grand Totals	0	8	47	2	0	15	3		0	76

Test Unit 4 was located in the central portion of the site approximately 30 m north of Test Unit 2. The unit was excavated in order to investigate a high concentration of artifacts found in a shovel test containing eight quartz flakes. The unit measured 1x1 m and was excavated in ten arbitrary levels to a depth of 101 cm below datum. The general soil profile consisted of a 10 to 15 cm thick layer of light brownish gray (10YR 6/2) sand (Stratum I) overlying a 20 to 25 cm thick layer of reddish yellow (7.5YR 6/6) sand (Stratum II). Stratum III). consisted of a 20 to 25 cm thick layer of yellowish brown (10YR 6/8) sand. Finally, Stratum IV consisted of a 50 cm thick layer of yellow (10YR 7/8) sand. A profile drawing is presented in Figure 34: A and Table 25 summarizes the distribution of artifact types recovered from Test Unit 4 by level.

Artifact recovery from Test Unit 4 was moderate to low and consisted of two sherds, one PPK, one core, one utilized flake, and 37 pieces of lithic debitage. Prehistoric ceramics included a Cape Fear sherd from level 2 and a Thom's Creek sherd in level 7. The Thom's Creek represents the earliest and deepest ceramic component at the site, however, its recovery in level 7 was somewhat surprising as Test Unit 2 encountered an intact Early Archaic lithic deposit at the same depth. A more detailed site-wide soil analysis should be completed should additional research at 38SU222 be undertaken.

The bulk of the prehistoric lithic collection occurred between levels 2 and 3. Lithic raw material was comprised mostly of quartz although a single rhyolite flake was identified. Prehistoric tools consisted of one Late Woodland/Mississippian Triangular, one core, and one utilized flake. The triangular point exhibited a basal width exceeding 17 mm, which in combination with the presence of a Cape Fear sherd at the same level suggests a Late Woodland cultural affiliation.

Table 25. 38SU222 Test Unit 4 Artifact Types By Soil Strata and Excavation Level.

Stratum	1/11	1/11	III	11/111	III	III/IV	IV	IV	IV	IV	
Levels	1	2	3	4	5	6	7	8	9	10	
Max. Depth (cmbs)	10	20	30	40	50	60	70	80	90	102	Totals
CERAMICS	MERCHAN	Print.						1000	THE SHEET		
Cape Fear 1 Simple Stamped	0	1	0	0	0	0	0	0	0	0	1
Thom's Creek Reed Separate Punctate	0	0	0	0	0	0	1	0	0	0	1
Sub-totals	0	1	0	0	0	0	1	0	0	0	2
LITHICS	CANAL S							William .			
PPK	0	0	0	1	0	0	0	0	0	0	15150
Core	0	1	0	0	0	0	0	0	0	0	1
Utilized Flake	0	0	1	0	0	0	0	0	0	0	11
Primary Flake	0	1	1	0	0	0	0	0	0	0	2
Secondary Flake	0	2	0	1	0	0	0	0	0	0	3
Tertiary Flake	0	18	6	2	0	0	0	0	0	0	26
Flake Frag.	0	0	1	0	0	0	0	0	0	0	1
Shatter/Chunk	0	1	0	0	0	0	0	0	0	0	1
Cortical Shatter	0	2	1	0	0	0	0	0	0	0	3
Sub-totals	0	25	10	4	0	0	0	0	0	0	39
Grand Totals	0	26	10	4	0	0	1	0	0	0	41

Test Unit 5 was located just east of the dirt road that runs along the long axis of the site. The unit was excavated in order to investigate a high concentration of artifacts found in a shovel test N540/E470, which contained seven flakes and two sherds. Test Unit 5 measured 1x1 m and was excavated in eight arbitrary levels to a depth of 93 cm below datum. The general soil profile consisted of a 5 to 10 cm thick layer of gray (10YR 6/1) sand (Stratum I) overlying a 15 to 25 cm thick layer of dark grayish (10YR 4/2) sand (Stratum II). Stratum III consisted of a 20 to 30 cm thick layer of yellowish brown (10YR 5/4) sand. Finally, Stratum IV consisted of a 40 cm thick layer of brownish yellow (10YR 6/6) sand. A profile drawing is presented in Figure 35: B and Table 26 summarizes the distribution of artifact types recovered from Test Unit 5 by level.

Artifact recovery from Test Unit 5 was high with almost equal amounts of prehistoric ceramics and lithics. The high frequency of ceramics was largely due to a partial pot burst (Feature 2) encountered in level 2. This feature produced 19 Pee Dee Complicated Stamped sherds and 10 sherdlets. The remaining sherds in the collection included one Santee, two Cape Fear, one Deptford, and two sherdlets. Most of these sherds were recovered in the first 20 cm of unit excavation and exhibited no particular vertical patterning. It should be noted that Feature 2 was defined by a discrete clustering of sherds in the southwest corner of the unit. No associated soil discoloration was present nor were any faunal remains or lithic material recovered as with Feature 1 Lithics were recovered between levels 1 and 5. Lithic raw materials consisted primarily of quartz and rhyolite. Quartz exhibited general clustering in levels 2 and 3, while a distinct concentration of rhyolite was present in level 4 and in the upper half of level 5. It is unclear the cultural affiliations of these components as no lithic diagnostics were recognized. However, based on trends in raw material usage from 38SU136/137 and 38SU141 (Cantley and Cable 2002), rhyolite appears to have been the preferred raw material during the Archaic occupation on the range while quartz use had more extensive

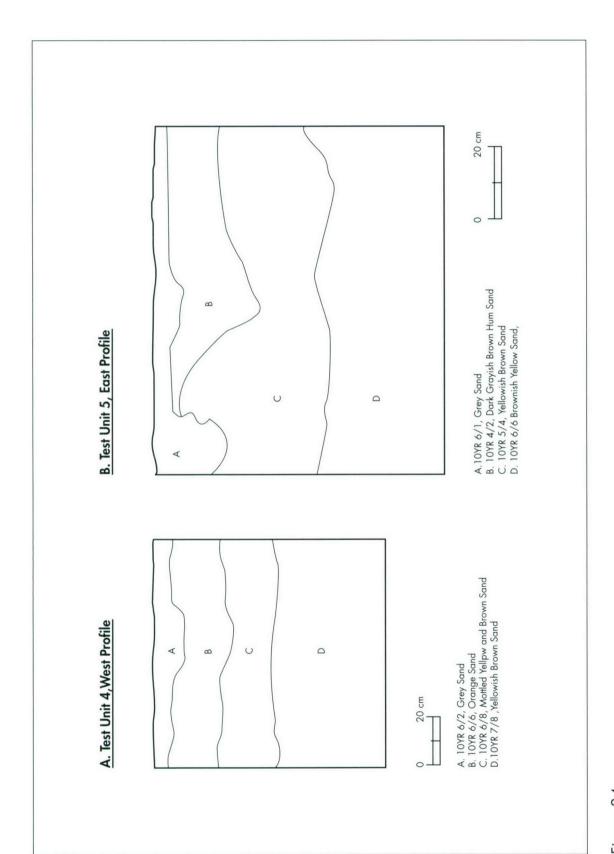


Figure 34 Soil Profiles for Test Unit 4 and 5

utilization during Woodland period occupations. The transition from rhyolite to quartz was also evident in the relatively equal usage of quartz and rhyolite during the early Woodland and ceramic Late Archaic. At both sites the Woodland/Archaic boundary is at approximately 40 cm below surface. If we extend this general trend to 38SU222, then the concentration of rhyolite in levels 4 and 5 should be assigned a pre-ceramic Archaic occupation, while the smaller quartz concentration should be associated with any of the Woodland or Mississippian ceramic components identified in levels 2 and 3. Unfortunately, a lack of ceramic component separation at these levels prevents any further cultural or temporal delineation with the current data.

TEST UNIT 6

Test Unit 6 was located in the northern portion of the site at grid coordinates N620/E470. The unit was excavated in order to investigate a concentration of artifacts found in a shovel test containing five flakes and one sherd. Test Unit 6 measured 1x1 m and was excavated in eight arbitrary levels to a depth of 83 cm below datum. The general soil profile consisted of a 10 to 15 cm thick layer of gray (10YR 4/1) sand (Stratum I) overlying a 10 cm thick layer of brown (10YR 5/4) sand (Stratum II). Stratum III consisted of a 10 to 15 cm thick layer of yellowish brown (10YR 5/6) sand. Finally, Stratum IV consisted of a 40 cm thick layer of brownish yellow (10YR 6/6) sand. Root disturbances were present in the upper 30 cm of unit excavation. A profile drawing is presented in Figure 35 and Table 27 summarizes the distribution of artifact types recovered from Test Unit 6 by level.

Overall artifact recovery in Test Unit 6 was moderate with the bulk of material contained between levels 2 and 4. Prehistoric ceramics consisted of five sherds and two sherdlets. Despite such a small collection, Deptford, Cape Fear and Pee Dee series sherds were identified reflecting occupations associated with Middle Woodland, Late Woodland, and Mississippian cultural periods, respectively. The lithic collection was comprised of nearly equal amounts of chert and quartz debitage. No lithic diagnostics were identified, although they are probably associated with any one of the three previously mentioned ceramic components. Additionally, there appears to be a lack of vertical separation of lithics by raw material as in Test Unit 5. However, an examination of lithic debitage profiles suggests that activities associated with chert reflects late stage reduction and curation whereas the quartz material indicates the full range of lithic reduction activities.

Table 26. 38SU222 Test Unit 5 Artifact Types By Soil Strata and Excavation Level.

Stratum	1/11	11/111	11/111	III	III	IV	IV	IV	
Levels	1	2	3	4	5	6	7	8	
Max. Depth (cmbs)	10	20	30	40	50	60	70	83	Totals
CERAMICS		Addition							Ten and
Pee Dee 1 Comp. Stamped.	0	13	0	0	0	0	0	0	13
Pee Dee 1 Indet. Stamped	0	2	0	0	0	0	0	0	2
Pee Dee 1 Indet.	0	4	0	0	0	0	0	0	4
Santee 2 Simple Stamp	1	0	0	0	0	0	0	0	1
Cape Fear 1 Fine Cord Marked	0	1	0	0	0	0	0	0	1
Cape Fear 1 Indet Dec.	0	0	0	0	1	0	0	0	1
Deptford 1 Cord Marked	0	0	1	0	0	0	0	0	1
Sherdlet	5	12	2	1	0	0	0	0	20
Sub-totals	6	32	3	1		0	0	0	43

LITHICS					Marie .	y Sub-			
Primary Flake	0	0	0	2	0	0	0	0	2
Interior Flake	0	1	0	3	0	0	0	0	4
Tertiary Flake	1	4	6	23	5	0	0	0	39
Flake Frag.	0	0	0	0	1	0	0	0	
Cortical Shatter	0	0	0	0	0	0	0	0	0
Shatter/Chunk	0	1	0	0	2	0	0	0	3
Sub-totals	1	6	6	28	8	0	0	0	49
Grand Totals	7	38	9	29	9	0	0	0	92

Table 27. 38SU222 Test Unit 6 Artifact Types By Soil Strata and Excavation Level.

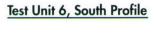
Stratum	1	II	11/111	III/IV	IV	IV	IV	IV	
Levels	1	2	3	4	5	6	7	8	
Max. Depth (cmbs)	10	20	30	40	50	60	70	80	Totals
CERAMICS			45.44						
Pee Dee 1 Comp. Stamped.	0	3	0	0	0	0	0	0	3
Cape Fear Simple Stamp	0	1	0	0	0	0	0	0	
Deptford 1 Fabric Impressed	0	0	1	0	0	0	0	0	
Sherdlet	0	1	0	1	0	0	0	0	2
Sub-totals	0	5	1	1	0	0	0	0	7
LITHICS									
Primary Flake	0	3	2	1	0	0	0	0	6
Secondary Flake	0	1	1	2	0	0	0	0	
Interior Flake	0	1	3	1	0	0	0	0	5
Tertiary Flake	0	12	12	9	2	0	0	0	35
Flake Frag.	0	1	1	0	0	0	0	0	2
Cortical Shatter	0	0	0	0	0	0	0	0	0
Shatter/Chunk	0	1	0	2	0	0	0	0	3
Sub-totals	0	19	19	15	2	0	0	0	55
Grand Totals	0	24	20	16	2	0	0	0	62

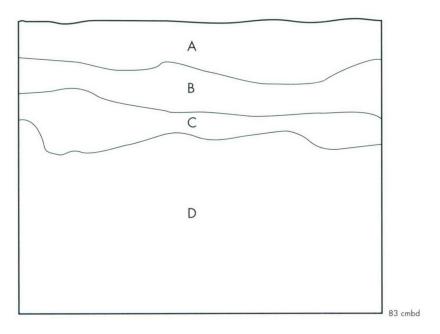
RECOMMENDATIONS

Data generated from testing investigations at 38SU222 suggests potential for future site research. From the shear density of artifacts collected from the road and corridor surface, it appeared highly likely that adjacent areas of the landform paralleling the tributary would contain intact subsurface deposits. This proved to be the case particularly along the relatively undisturbed central and western sections of the landform. Shovel testing and unit excavation in these areas identified substantial assemblages of Deptford, Cape Fear, Santee, and Pee Dee series sherds indicating a sustained period of intensive occupation from the Middle Woodland sub-period to the Mississippian. Additionally, the discovery of Late Woodland and Mississippian features in the upper strata along with the presence of a potential deeply buried Early Archaic lithic component suggests that the stratigraphic integrity of these deposits has been relatively well preserved. While the eastern third of the site has been heavily disturbed from road and utility corridor construction, the remaining site area appears largely

intact. Given the site characteristics as briefly outlined above, the potential exists for research in regional and local chronology, ceramic phase definition, intrasite structure, settlement patterning, and subsistence. Therefore, we recommend site 38SU222 eligible for nomination to the NRHP. Should data recovery excavations ever be required for this site, we recommend that a geoarchaeological assessment of the soil stratigraphy and age be incorporated as an element of such data recovery.

Figure 35 Soil Profile for Test Unit 6





0 20 cm

- A. 10yr 4/1, Grey Sand
- B. 10yr 5/4, Brown Sand
- C. 10yr 5/6, Mottled Brown and Yellowish Brown Sand
- D. 10yr 6/6, Yellowish-Brown Sand

X. ARCHAEOLOGICAL TESTING AT SITE 38SU191

Site 38SU191 is located in the Sand Hills region of the range on a broad landform and gentle slope immediately west of Brunson Swamp and a small Carolina bay. An unnamed dirt road and an adjacent barbed wire fence runs NW-SE across the site. West of the dirt road site vegetation consists of sparse mixed scrub oak forest, while to the east dense mature scrub oak forest with moderate understory predominates. The site was first identified by the South Carolina Institute of Anthropology and Archaeology (Kreisa et al. 1996). The site was recommended as potentially eligible for inclusion in the NRHP based on the density and diversity of artifacts encountered along the road surface. The assemblage included lithic reduction debris, a variety tool forms including several small Late Woodland/Mississippian triangular points; and variety of decorated sherds representing Middle Woodland, Late Woodland, and Mississippian sub-period components.

SHOVEL TESTING AND SURFACE COLLECTION

The first stage of Phase II investigations at 38SU191 included tethered surface artifact collection and the excavation of close interval shovel tests for site boundary definition (Figure 36). The latter required the excavation of 218 shovel tests, of which 61 (28%) produced positive results. Shovel testing revealed the site to measure 260 x 180 m, its boundaries extending well beyond the road and fence-line to the edge of Brunson Swamp. Soils encountered during the shovel testing procedure consisted of a 8 to 10 cm thick layer of dark grayish brown (10YR 4/2) fine sand overlying a 30 to 40 cm thick layer of brownish yellow (10YR 6/6) sand. Lastly, Stratum III consisted of a 50 cm thick layer of yellow (10YR 7/8) sand.

The artifact assemblage (n=534) from this stage of the investigation included a diverse set of lithic tools, debitage and ceramics. The lithic collection represented the full range of lithic reduction although late stage debitage was clearly dominant. Lithic tool forms included five Late Woodland/Mississippian Triangular points, three bifaces, one drill, two end-scrapers, one biface-scraper, two cores, one perforator, and two utilized flakes. Identified ceramic components included Thom's Creek 1, Refuge 1.1, Refuge 2.1, Woodland 1, Woodland 2, Deptford 1, Deptford 2, Cape Fear 1, Cape Fear 2, Santee 1, Santee 2, Pee Dee 1, Pee Dee 2, and Pee Dee 3.

Artifact density maps were generated using material collected from both surface collection and shovel testing (Figures 37-39). An examination of the distribution of total artifacts shows that proximity to Brunson Swamp correlates with the areas of highest artifact density. Two large artifact concentrations can be readily seen. The first occurs in the northern portion of the site immediately adjacent to Brunson Swamp. Three smaller clusters can also be recognized within this larger concentration. The second occurs in the southern portion of the site adjacent to the road. It should be noted that cultural material exposed on the road surface were collected in 10-m arbitrary sections. These were later associated with centrally located, arbitrary grid points in an effort to incorporate the material into the overall dataset.

As ceramics comprised the predominant diagnostic material at the site, contour density maps were generated to illustrate the distribution of ceramics by component (Figures 40-44). Woodland and Deptford series sherds were combined in order to show the total distribution of the site's Middle Woodland component. A notable pattern in intra-site settlement emerges when examining the temporal variation in the distribution of ceramic components. The small Early Woodland (Refuge phase) occupation appears to be limited to the eastern boundary of the site. However, during the Middle Woodland sub-period, site occupation dramatically

Figure 36 Site 38SU191 Sketch Map

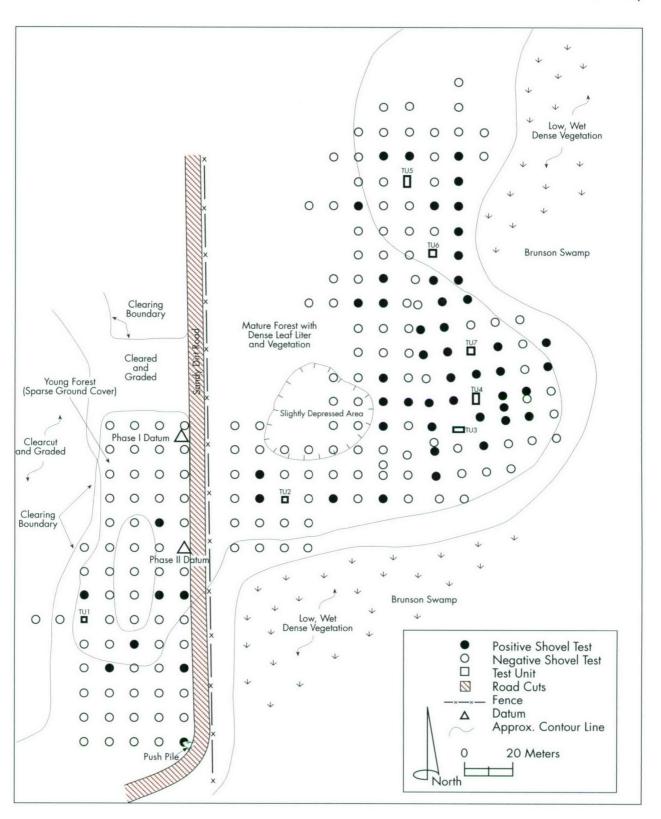


Figure 37 Total Artifact Distribution Map

38SU191 Total Artifact Distribution

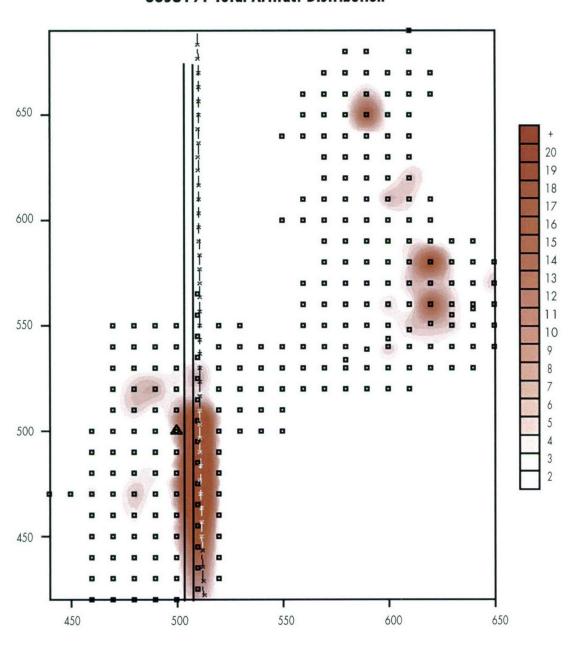


Figure 38 Total Lithic Distribution Map

38SU191 Total Lithics Distribution

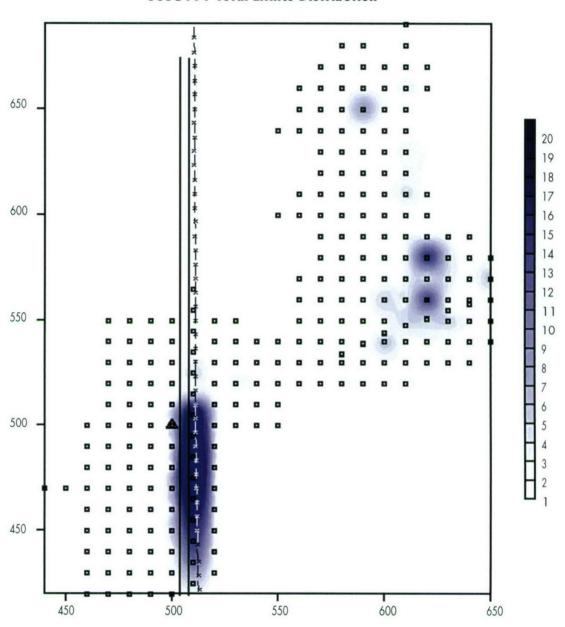


Figure 39 Total Ceramic Distribution Map



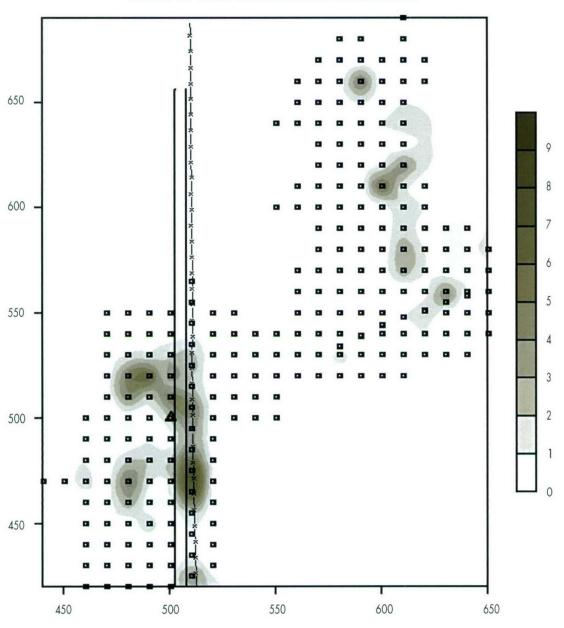


Figure 40 Total Refuge Distribution Map



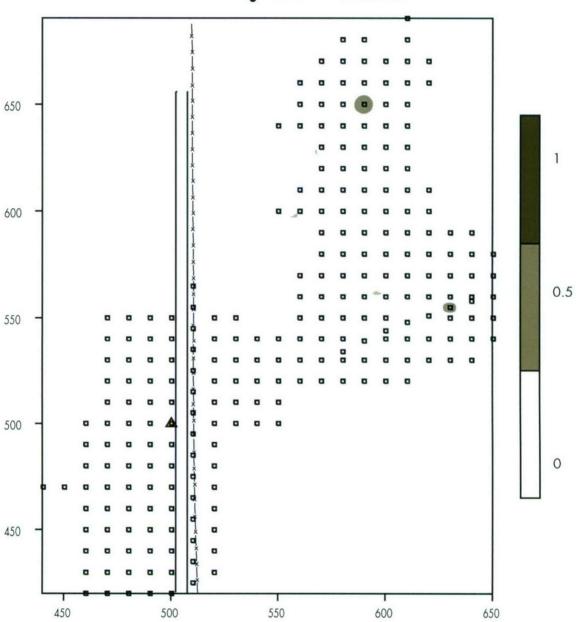


Figure 41 Total Woodland and Deptford Series Distribution Map



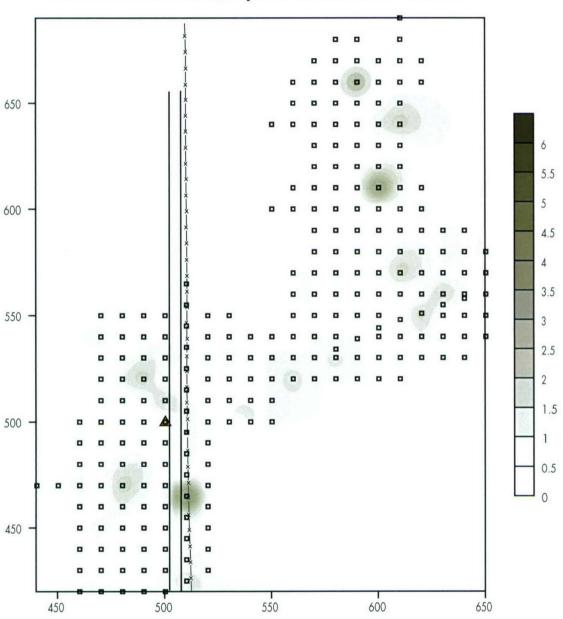


Figure 42 Total Cape Fear Series Distribution Map

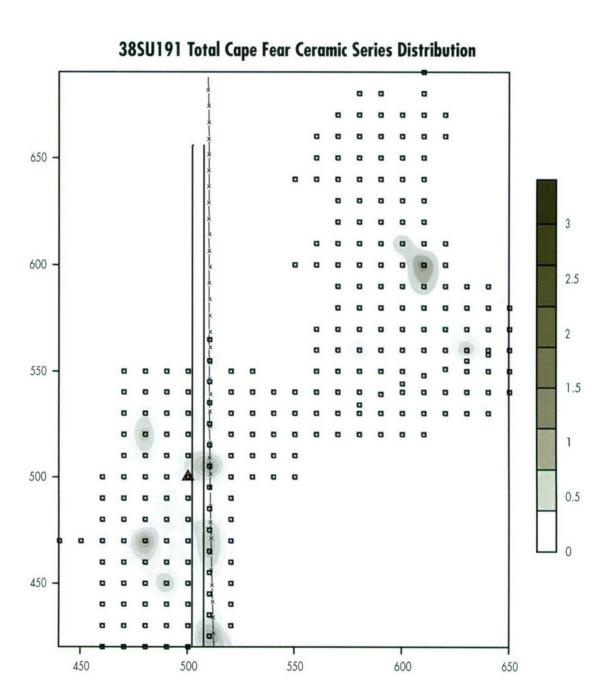


Figure 43 Total Santee Series Distribution Map



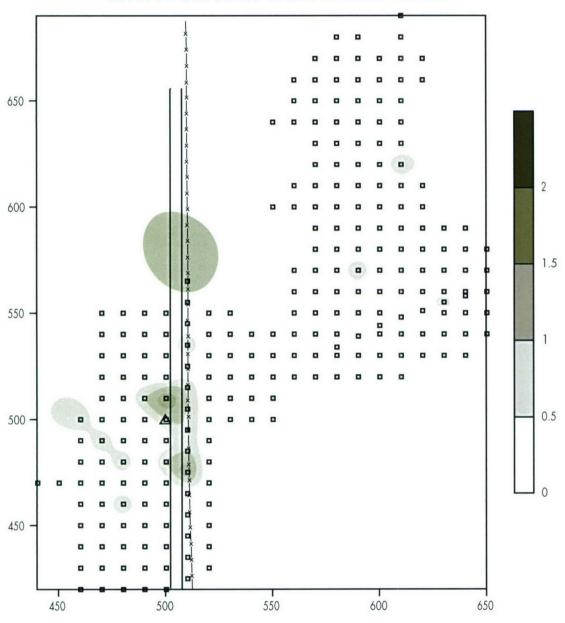
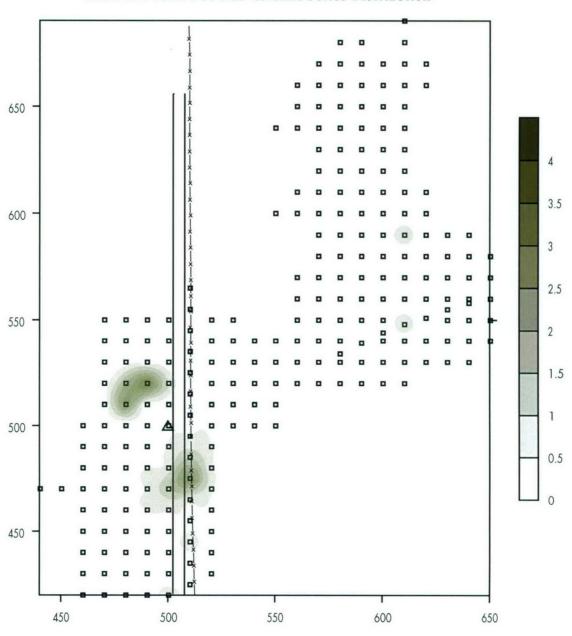


Figure 44 Total Pee Dee Series Distribution Map

38SU191 Total Pee Dee Ceramic Series Distribution



increases. This is seen in both the density and wide distribution of Deptford and Woodland series ceramics. By the Late Woodland sub-period, a slight shift in settlement occurs as Cape Fear ceramics appear to be more densely clustered in the western portion of the site. This gradual east-west shift becomes most prominent during the Mississippian period as both Santee and Pee Dee ceramics are heavily concentrated in the western portion of the site and occur only sporadically east of the dirt road.

TEST UNIT EXCAVATION

Three 1×2 m units and four 1×1 m units were excavated in areas exhibiting either a significantly large or diverse quantity of artifacts. Most of these units were completed within the first artifact concentration in the northern area of the site where there appeared to be intact buried deposits. The second artifact concentration in the southern portion of the site was known almost entirely from surface artifact collection. Few artifacts were recovered from the actual shovel testing procedure and those that were tended to be limited to the upper 20 cm below surface.

TEST UNIT 1

Test Unit 1 is located in the southwestern portion of site. The unit was established to investigate the presence of a deeply buried Early/Middle Archaic end-scraper found in Shovel Test N470 E460. A datum was established 10 cm above surface in the northeast corner of Test Unit 1. The unit was excavated in nine, 10-cm arbitrary levels to a depth of 100 cm below datum. The general soil profile encountered during the excavation of Test Unit 1 consisted of a 4 cm thick layer of black (10YR 2/1) humic sand (Stratum II) overlying a 4 to 12 cm thick layer of loose gray (10YR 6/1) sand (Stratum III). Stratum III consisted of a 8 to 12 cm thick layer of brown (10YR 6/6) sand. Stratum IV consists of a 10 to 20 cm thick layer of mottled yellowish brown (10YR 7/8) sand. Finally, Stratum V consists of a 50 to 60 cm thick layer of yellowish brown (10Y 7/6) sand.

Test Unit 1 profile drawing is presented in Figure 45: A. Table 28 summarizes the distribution of artifact types recovered from Test Unit 1 by level. Artifact recovery was extremely light in Test Unit 1. A single artifact was recovered during unit excavation, which consisted of a single Deptford 2 Check Stamped sherd in Level 1. As no additional material was recovered from the buried Archaic component, we can only assume the nature of this occupation was ephemeral and of low intensity.

Table 28. 38SU191Test Unit 1 Artifact Types By Soil Strata and Excavation Level.

Stratum	1/11/111	11/111	IV	IV/V	٧	٧	٧	٧	٧	
Levels	1	2	3	4	5	6	7	8	9	
Max. Depth (cmbs)	10	20	30	40	50	60	70	80	90	Totals
CERAMICS							19/20/20			
Deptford 2 Check Stamped	1	0	0	0	0	0	0	0	0	1
Sub-totals	1	0	0	0	0	0	0	0	0	0
LITHICS		Arter San								
Sub-totals	0	0	0	0	0	0	0	0	0	0
Grand Totals	1	0	0	0	0	0	0	0	0	get have

Test Unit 2 is located in the central portion of the site. It was established to investigate the presence of a Nolichucky triangular point fragment found in shovel test N520 E540. A datum was established 10 cm above surface in the northeast corner and the unit was excavated in six, 10-cm arbitrary levels to a depth of 68 centimeters below datum. The general soil profile encountered during the excavation of Test Unit 2 consisted of a 8 to 15 cm thick layer of dark gray (10YR 4/1) humic sand (Stratum II) overlying a 50 to 60 cm thick layer of brownish yellow (10YR 6/6) sand (Stratum II).

Test Unit 2 profile drawing is presented in Figure 45: B. Table 29 summarizes the distribution of artifact types recovered from Test Unit 2 by level. Artifact recovery was very light in Test Unit 2 consisting of four artifacts including two flakes, one perforator/drill, and one Deptford 2 Check Stamped sherd. All material was found at the top of the second soil strata (levels 2 and 3) and appear to belong to the same cultural component and possibly the same occupation. Although absolute dates are not currently available, Nolichucky triangular points are most often found in association with Middle Woodland ceramic contexts. Despite the low density of the deposit in Test Unit 2, the diversity of the collection indicates an unusually wide range of activities. The unit's close proximity to the dense artifact concentration located along the road surface suggests that material recovered from Test Unit 2 represents the peripheral residue from the same concentration. Alternatively, it may also represent the activities and discard from a spatially discrete, single event Deptford 2 occupation, undisturbed by later Mississippian occupations and historic road grading.

Table 29. 38SU191 Test Unit 2 Artifact Types By Soil Strata and Excavation Level

Stratum		1/11	II	-II		II	
Levels	1	2	3	4	5	6	Helian Palan
Max. Depth (cmbs)	10	20	30	40	50	60	Totals
CERAMICS							
Deptford 2 Check Stamped	0	1	0	0	0	0	1
Sub-totals	0		0	0	0	0	The second
LITHICS					ENDAL MARK	HOLDE DATE	
Perforator/Drill	0	1	0	0	0	0	1
Secondary Flake	0	1	0	0	0	0	1 _
Tertiary Flake	0	0	1	0	0	0	1
Sub-totals	0	2	1	0	0	0	3
Grand Totals	0	3	1	0	0	0	4

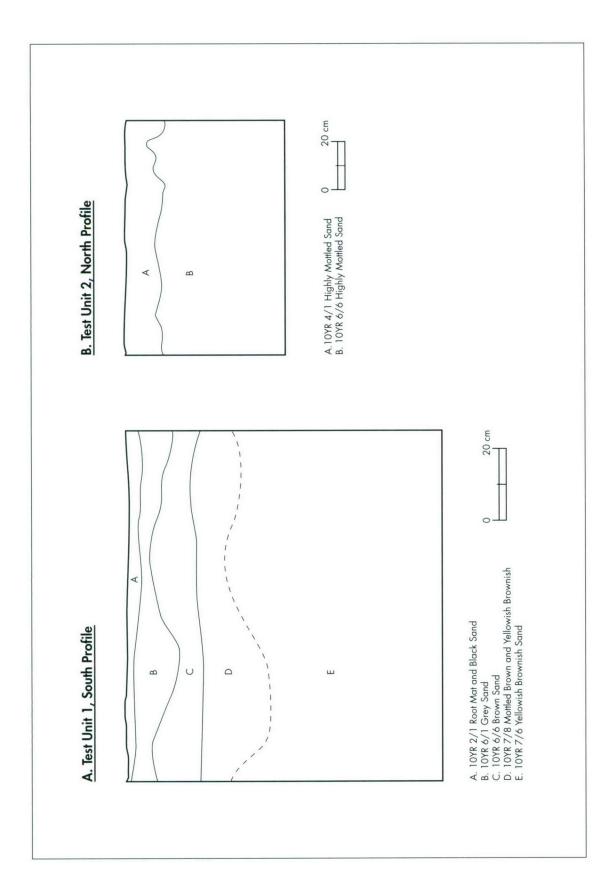


Figure 45 Soil Profiles for Test Unit 1 and 2

Test Unit 3 is located in the east central portion of the site on a small, east trending land spur adjacent to Brunson Swamp. The unit measured 1 x 2 m and was established to investigate the ceramic and lithic concentration found in Transect A, STP 4, which contained one sherd, one biface, two flakes, and one bone fragment. This shovel test was completed as part of an exploratory transect to investigate the presence of surface artifacts located some distance from what was then the known site boundary. A datum was established 10 cm above surface in the northeast corner the unit was excavated in ten, 10-cm arbitrary levels to a depth of 110 centimeters below datum. The general soil profile encountered during the excavation of Test Unit 1 consisted of a 8 to 10 cm thick layer of dark grayish brown (10YR 4/2) sand (Stratum I) overlying a 40 cm thick layer of brownish yellow (10YR 6/6) sand (Stratum II). Stratum III consisted of a 50 cm thick layer of yellow (10YR 7/8).

Test Unit 3 profile drawing is presented in Figure 46: A. Table 30 summarizes the distribution of artifact types recovered from Test Unit 3 by level. Overall, artifact recovery from Test Unit 3 was moderate to high and included a variety of prehistoric tools, debitage and ceramics. The vertical distribution of artifacts indicates three major cultural components or occupation surfaces and one minor component. The earliest and deepest component consists of a lithic concentration occurring in Stratum III in levels 7 and 8. Artifacts consist exclusively of lithic debitage representing a full range of lithic reduction activities. While no lithic diagnostics were recovered, the vertical positioning of this deposit and the lack of ceramics would suggest either a Middle or Early Archaic occupation.

The next concentration was identified in the second soil stratum between levels 3 and 5. This deposit represents a fairly substantial Woodland phase occupation comprised of prehistoric lithics and a small collection of Woodland 2 plain sherds. Prehistoric lithics consists of late stage debitage and a wide range of tool forms including one Bradley Spike, two biface fragments, one core, one utilized flake blade, and several fragments of FCR. Bradley Spikes, like Woodland 2 plain sherds, are often associated with Middle Woodland Deptford phase contexts within the PECR. However, the only occurrence of Deptford ceramics was in Level 1, which indicates some degree of post-depositional disturbance. Overall, the density and diversity of artifacts in this concentration is suggestive of either primary and/or secondary artifact discard possibly reflecting the output from a discrete lithic activity area.

The remaining components include a single Cape Fear sherd recovered in level 3. This sherd represents the only evidence for a Late Woodland component in Test Unit 3. Lastly, the most recent occupation was identified between levels 1 and 3 and consists of nine Pee Dee series sherds. It was the presence of Mississippian complicated stamped pottery on the ground surface that prompted further investigation east of the dirt road. Unit excavation in this portion of the site has clearly identified the presence of a shallow Mississippian deposit in the upper strata. Moreover, the low frequency of associated lithic material in these levels suggests a possible activity area associated with either cooking or storage and that these activities were spatially segregated from those involving lithic reduction and use.

Overall, depositional integrity is good in Test Unit 3. With the exception of a single Deptford sherd recovered in Level 1, components exhibit vertical separation. The vertical distribution of components provides a relatively undisturbed picture of the occupational history at site 38SU191 with earliest use of the site apparently taking place during the Early or Middle Archaic subperiods. A major occupation(s) appears to have occurred during the Middle Woodland, which was followed by relatively minimal site use during the Late Woodland subperiod. Finally, occupational intensity appears to have increased during the Mississippian Period.

Test Unit 4 was located just north and east of Test Unit 3 at grid coordinates N560 E620. The unit was completed in order to investigate a suspected midden deposit. The initial shovel test contained the highest artifact count recovered from any shovel test at the site, which included three Cape Fear sherds, six Woodland Plain, three sherdlets, and 18 flakes. An associated soil discoloration and charcoal flecking was also noted during the shovel testing. A datum was established 10 cm above surface in the northeast corner of the unit and was excavated in eleven, 10-cm arbitrary levels to a depth of 116 centimeters below datum. The general soil profile encountered during the excavation of Test Unit 4 consisted of a 8 to 12 cm thick layer of dark gray (10YR 4/1) sand (Stratum I) overlying a 30 to 50 cm thick layer of light yellowish brown (10YR 6/4) sand with moderate to abundant charcoal flecking (Stratum II). Stratum III consisted of a 60 cm thick layer of brownish yellow (10YR 6/6). During the course of excavation, light root disturbances were present at the Stratum II/III transition. A profile drawing for Test Unit 4 is presented in Figure 46: B. Table 31 summarizes the distribution of artifacts by level.

Artifact recovery from Test Unit 4 was high and included a variety of prehistoric tools, debitage and ceramics. All cultural material was recovered between levels 3 and 9 with the greatest clustering of artifacts occurring between levels 4 and 5. Prehistoric lithics peaked between levels 3 and 7 and were most heavily concentrated between levels 4 and 5. Prehistoric lithics consisted of one medium sized Woodland Triangular tip fragment (possibly Yadkin), one core, two hammerstones fragments, two utilized flakes, 10 fragments of fire-cracked-rock, and a large collection of debitage. Lithic debitage profiles indicate a wide range of reduction activity from cortex removal to late stage tool manufacture and maintenance. Lithic raw material composition was diverse although orthoquartzite was clearly dominant. Fossiliferous chert varieties were the second most abundant raw material, while quartz, quartzite, and rhyolite comprised the remaining minority.

The ceramic collection was comprised of at least four distinct occupational phases including Refuge (Early Woodland), Deptford (late Early/Middle Woodland), Berkeley (Late Woodland), and Pee Dee (Mississippian). An examination of the vertical distribution of ceramic components shows that with the exception of a single Refuge sherd recovered from level 3, a general seriation of occupational clusters has been preserved. The primary ceramic component consists of a large collection of Deptford Check Stamped and Woodland plain ceramic types recovered between levels 3 and 7. The highest frequency of these sherds occurred in level 4, which may represent the original occupation surface. Overlying the Deptford concentration was a Late Woodland component (Berkeley I phase) comprised of Cape Fear series sherds. These sherds were clustered in level 3 although two specimens were recovered from level 5. The most recent component is comprised of single Pee Dee series ceramic recovered in Level 3. This level in particular exhibited the greatest degree of mixing which is not uncommon in the upper strata throughout sites on the range. While all of the sites have received some degree of mixing due to plant and animal activities, the upper strata have also been impacted by historic plowing and timber harvesting.

Overall, the Deptford component, which includes Woodland 2 series sherds, correlates strongly with the densest clustering of total lithics in Test Unit 4. Given the high density and diversity of material found between levels 3 and 7, in combination with the abundance of charcoal flecking, it appears that this area was repeatedly used for the trash disposal (midden) during the site's Middle Woodland occupation. The midden's location on level ground and in close proximity to the Brunson Swamp indicates either a household or community pattern of secondary disposal.

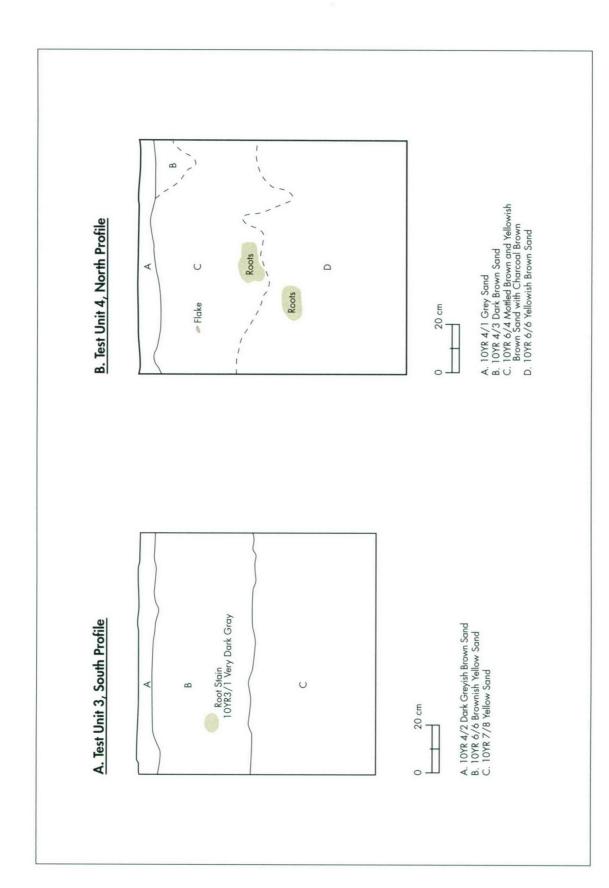


Figure 46 Soil Profiles for Test Unit 3 and 4

Table 30. 38SU191 Test Unit 3 Artifact Types By Soil Strata and Excavation Level.

Stratum	- 1	II	11	11	II	III	III	III	III	III	11/111	
Levels	1	2	3	4	5	6	7	8	9	10	Wall Collapse	
Max. Depth (cmbs)	10	20	30	40	50	60	70	80	90	100		Totals
CERAMICS			AT THE				U.S.B					
Pee Dee 1 Comp. Stamped	1	2	2	0	0	0	0	0	0	0	1	6
Pee Dee 1 Indet. Stamped	2	2	0	0	0	0	0	0	0	0	0	4
Cape Fear 1 Fine Cord Marked	0	0	1	0	0	0	0	0	0	0	0	
Deptford 2.2 Fabric Impressed	1	0	0	0	0	0	0	0	0	0	0	
Woodland 2 Plain	0	0	2	6	0	0	0	0	0	0	0	8
Woodland 2 Indet.	0	0	1	0	0	0	0	0	0	0	0	1
Sherdlet	0	1	0	1	0	0	0	0	0	0	0	2
Sub-totals	4	5	6	7	0	0	0	0	0	0	1	23
LITHICS		TATE A						FRENE				
PPK	0	0	0	0	1	0	0	0	0	0	0	2
Biface Tip	0	0	1	0	0	0	0	0	0	0	0	
Core	0	0	0	1	0	0	0	0	0	0	0	n lar
Flake Blade	0	0	0	1	0	0	0	0	0	0	0	10
Primary Flake	0	0	0	0	1	0	1	1	0	0	0	3
Secondary Flake	0	0	0	0	0	0	1	0	0	0	0	1
Interior Flake	0	0	0	0	0	0	1	1	0	0	0	2
Tertiary Flake	0	0	7	13	5	3	9	5	0	0	1	42
Flake Fragment	0	0	2	1	0	0	0	0	0	0	1	3
Shatter/Chunk	0	0	0	6	2	0	0	2	0	0	0	10
FCR	0	0	0	6	2	0	0	0	0	0	0	8
Sub-totals	0	0	10	28	12	3	12	9	0	0	2	69
Grand Totals	4	5	16	35	12	3	12	9	0	0	3	92

Table 31. 38SU191 Test Unit 4 Artifact Types By Soil Strata and Excavation Level .

Stratum	1	1/11	II	II	11/111	III	11/111	III	III	III	III	
Levels	1	2	3	4	5	6	7	8	9	10	11	
Max. Depth (cmbs)	6	16	26	36	46	56	66	76	86	96	106	Totals
CERAMICS												
Pee Dee 1 Comp. Stamped	0	0	1	0	0	0	0	0	0	0	0	
Cape Fear 1 Simple Stamped	0	0	1	0	0	0	0	0	0	0	0	
Cape Fear 1 Fine Cord Marked	0	0	4	0	1	0	0	0	0	0	0	5

Stratum	-	1/11	- 11	II	11/111	III	11/111	III	III	III	III	T WATE
Levels	1	2	3	4	5	6	7	8	9	10	11	
Max. Depth (cmbs)	6	16	26	36	46	56	66	76	86	96	106	Totals
CERAMICS				Talk		TE INTE				THE LA		J
Cape Fear 1 Indet Stamped	0	0	0	0	1	0	0	0	0	0	0	1
Deptford 2 Check Stamped	0	0	1	0	0	0	0	0	0	0	0	1
Deptford 1 Check Stamped	0	0	1	7	2	0	0	0	0	0	0	10
Woodland 2 Plain	0	0	6	27	12	4	1	0	0	0	0	50
Woodland 2 Indet. Dec	0	0	1	0	0	0	0	0	0	0	0	1
Woodland 2 Indet.	0	0	2	2	2	3	0	0	0	0	0	9
Refuge 1.2 Incised Punctate	0	0	1	0	0	0	0	0	0	0	0	1
Sherdlet	0	0	8	20	13	2	1	1	0	0	0	45
Sub-totals	0	0	26	56	31	9	2	1	0	0	0	125
LITHICS	JE B			THEFT	Her than			1 1 1 1	TIGHTS			
PPK	0	0	0	0	1	0	0	0	0	0	0	1
Core	0	0	0	0	1	0	0	0	0	0	0	SET DE
Hammerstone	0	0	0	0	1	0	0	0	0	0	0	1
Primary Flake	0	0	0	2	1	0	1	0	0	0	0	4
Secondary Flake	0	0	0	1	1	0	1	0	0	0	0	3
Interior Flake	0	0	5	12	12	4	2	1	2	0	0	38
Tertiary Flake	0	0	17	34	41	13	6	6	8	0	0	125
Flake Frag.	0	0	0	4	3	2	0	1	0	0	0	10
Shatter/Chunk	0	0	0	1	2	1	4	0	0	0	0	8
Cortical Shatter	0	0	0	0	0	0	0	1	0	0	0	1
Cobble	0	0	0	0	0	1	0	0	0	0	0	
FCR	0	0	0	0	6	0	4	0	0	0	0	10
Sub-totals	0	0	22	54	69	21	18	9	10	0	0	203
Grand Totals	0	0	48	110	100	30	20	10	10	0	0	328

Test Unit 5 was the northernmost test unit completed at the site. The unit was excavated in order to investigate a concentration of artifacts found in Shovel Test N650/E590. The shovel test contained a single Refuge sherd and an unusually large number of FCR. It was suspected that this location might contain an Early Woodland rock hearth or rock oven. Therefore, a 1 x 2 m unit was established at this grid coordinate. A datum was established 8 cm above surface in the northeast corner and the unit was excavated in eleven, 10-cm arbitrary levels to a depth of 102 cm below datum. The general soil profile encountered during the excavation of Test

Unit 5 consisted of a 12 to 18 cm thick layer of dark gray (10YR 4/1) sand (Stratum I) overlying a 40 to 45 cm thick layer of light yellowish brown (10YR 5/6) sand with light to moderate charcoal flecking (Stratum II). Stratum III consisted of a 45 cm thick layer of strong brown (7.5YR 5/8). A profile drawing for Test Unit 4 is presented in Figure 47: A. Table 32 summarizes the distribution of artifact types recovered from Test Unit 5 by level.

Overall, artifact recovery from Test Unit 5 was moderate. All cultural material was recovered between levels 2 and 8 with greatest clustering of artifacts occurring between levels 4 and 5. Prehistoric ceramics were recovered entirely within the second soil strata between levels 3 and 5. A small Middle Woodland (Deptford II phase) component comprised of various Deptford Cord Marked and plain sherds (Woodland 2 plain) occurs in this zone. No additional Refuge sherds were recognized.

The lithic collection was comprised primarily of FCR and a light scatter of intermediate and late stage reduction debris. Lithic debitage and FCR are clearly concentrated in the second soil strata in levels 4 and 5. No distinct discoloration or horizontal clustering of FCR was evident during the course of excavation, although sporadic charcoal flecking was observed, suggesting the hearth did not survive intact or that this area was instead used for trash disposal related to hearth maintenance. It is interesting to note the vertical relationship of FCR and ceramics. The densest clustering of ceramics rests immediately above the densest clustering of FCR. This patterning suggests a degree of vertical coherence for a former hearth or cooking facility and ceramics that were used with it, despite a somewhat blurred horizontal patterning.

A second lithic concentration was present in the third soil strata between levels 7 and 8. This extremely light scatter produced an abrading stone and was the only lithic tool identified in the unit. No associated diagnostic material was recovered but give its depth, it is likely the output from an ephemeral Early or Middle Archaic occupation.

Prehistoric ceramics were recovered entirely within the second soil strata between levels 3 and 5 and represented a small Middle Woodland (Deptford II phase) component comprised of various Deptford Cord Marked and plain sherds (Woodland 2 plain). No additional Early Woodland Refuge sherds were recognized. And it appears the majority of the concentration in the second soil strata is associated with a later Middle Woodland Deptford component.

Table 32. 38SU191 Test Unit 5 Artifact Types By Soil Strata and Excavation Level.

Stratum		1/11	II	II	II	11/111	III	III	III	III	
Levels	1	2	3	4	5	6	7	8	9	10	
Max. Depth (cmbs)	9	19	29	39	49	59	69	79	89	99	Totals
CERAMICS											
Deptford 2 Cord Marked	0	0	1	0	0	0	0	0	0	0	
Deptford 2 Wide Spaced Cord Marked	0	0	1	0	0	0	0	0	0	0	1
Deptford 1 Cord Marked	0	0	1	0	0	0	0	0	0	0	
Deptford 1 Wide Spaced Cord Marked	0	0	0	2	0	0	0	0	0	0	2
Woodland 2 Plain	0	1	4	3	1	0	0	0	0	0	9
Woodland 2 Indet.	0	0	1	0	0	0	0	0	0	0	

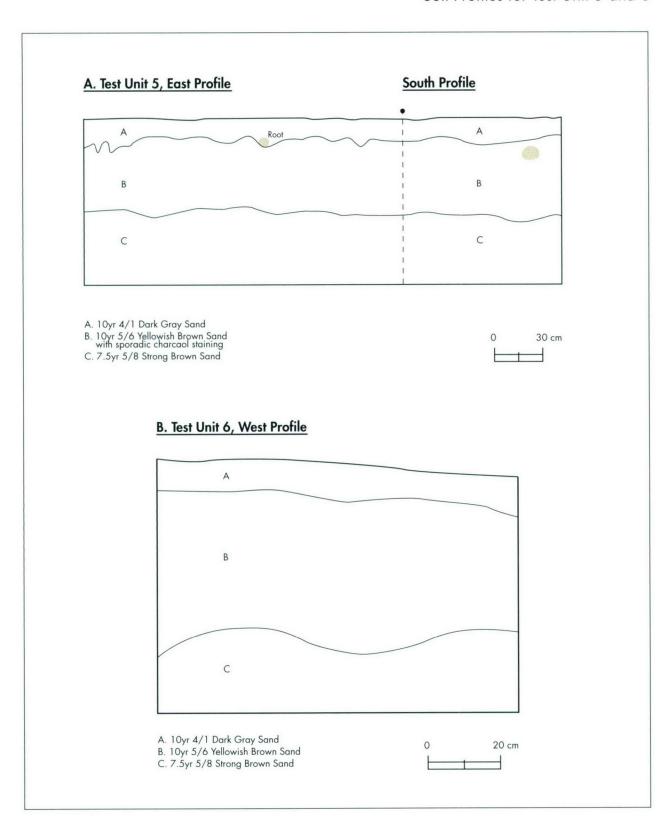
Sherdlet	0	0	3	2	1	0	0	0	0	0	6
Sub-totals	0	1	11	7	2	0	0	0	0	0	21
LITHICS								e i de la			
Core	0	0	0	1	0	0	0	0	0	0	
Abrading Stone	0	0	0	0	0	0	0	1	0	0	1
Secondary Flake	0	1	0	1	0	0	0	0	0	0	2
Interior Flake	0	0	0	1	0	1	0	1	0	0	3
Tertiary Flake	0	0	0	0	0	1	1	1	0	0	3
Flake Frag.	0	0	0	0	0	0	0	0	0	0	0
Shatter/Chunk	0	0	0	1	1	0	0	0	0	0	2
FCR	0	0	5	23	36	14	0	0	0	0	78
Sub-totals	0	1	5	27	37	16	1	3	0	0	90
Grand Totals	0	2	16	34	39	16		3	0	0	111

TEST UNIT 6

Test Unit 6 was located in the northeastern portion of the site approximately 30 meters south of Test Unit 7. The unit was excavated in order to investigate the presence of a deeply-buried, well preserved quartz biface found in Shovel Test N620/E600. A Woodland component was also recognized in the upper strata of the shovel test and it was thought that unit excavation would reveal preserved stratified deposits. Unit dimensions measured 1 x 1 m and a datum was established 10 cm above surface in the southeast corner. The unit was then excavated in seven, 10-cm arbitrary levels to a depth of 80 centimeters below datum. The general soil profile encountered during unit excavation consisted of an 8 to 10 cm thick layer of dark gray (10YR 4/1) sand (Stratum I) overlying a 35 to 45 cm thick layer of light yellowish brown (10YR 5/6) sand (Stratum II). Stratum III consisted of a 16 to 25 cm thick layer of strong brown (7.5YR 5/8) sand. A profile drawing for Test Unit 6 is presented in Figure 47: B. Table 33 summarizes the distribution of artifact types recovered from Test Unit 6 by level.

Artifact recovery from Test Unit 6 was light and consisted of prehistoric ceramics and a single fragment of FCR. All cultural material was recovered in the second soil strata between levels 2 and 5 with the greatest clustering of artifacts occurring in level 4. Two ceramic components were recognized during the ceramic analysis. The first is an Early Woodland Refuge phase component in level 4, which consists of one positively identified dentate stamped sherd and several plain or undecorated sherds. The second is a Deptford component consisting of Deptford Indeterminate Decorated sherd and a single Woodland Plain sherd recovered from levels 2 and 3, respectively. Generally speaking, plain or undecorated sherds exhibiting various Woodlandceramic paste and temper attributes are generally subsumed under the broad Woodland ceramic series designation. Previous investigations on the range shows that large proportions of Woodland series ceramics are affiliated with Deptford occupations while the remaining minority share paste characteristics consistent with Refuge series ceramics. The recovery of Refuge, Woodland 1, and Woodland 2 sherds would suggest the presence of at least three Refuge

Figure 47 Soil Profiles for Test Unit 5 and 6



vessels in Level 4. Assuming a preservation of depositional integrity, this may somewhat expand the temporal range of non-grog/sherd tempered Woodland series paste variants. Alternatively, the grouping of Deptford and Woodland sherds may collectively represent the primary occupation within Test Unit 6, which would then relegate the occurrence of a single Refuge sherd to that of a relatively minor occupation.

Table 33. 38SU191 Test Unit 6 Artifact Types	By Soil Strata and Excavation Level.
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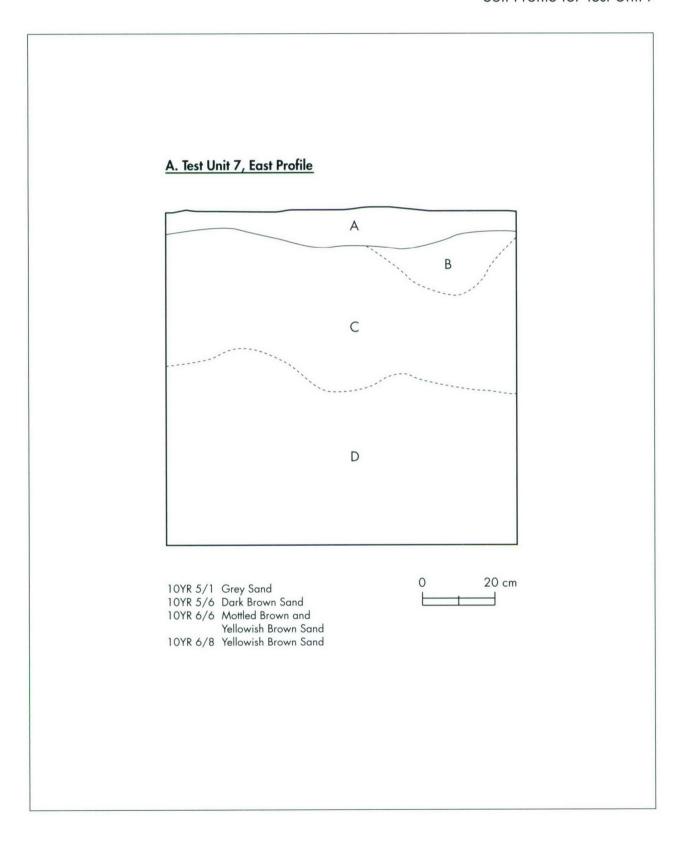
Stratum		l II	II	II	II.	III	111	
Levels	1	2	3	4	5	6	7	
Max. Depth (cmbs)	10	20	30	40	50	60	70	Totals
CERAMICS	THE WATER	CONTRACT.						
Deptford 1 Indet. Dec.	0	1	0	0	0	0	0	1
Woodland 2 Plain	0	0	1	3	0	0	0	4
Woodland 1 Plain	0	0	0	1	0	0	0	1
Refuge 2.2 Dent. Stamped	0	0	0	1	0	0	0	1
Sub-totals	0	1		5	0	0	0	7
LITHICS								
FCR	0	0	0	0	1	0	0	1
Sub-totals	0	0	0	0		0	0	1
Grand Totals	0			5	1	0	0	8

TEST UNIT 7

Test Unit 7 was located in the east central portion of the site approximately 20 m north of Test Unit 4. The unit was excavated in order to investigate a high concentration of artifacts found in Shovel Test N580/E620. This shovel test contained one Woodland 2 Plain sherd, one quartz biface, one FCR fragment, and 18 flakes representing a full range of lithic reduction activities. It was suspected that this area of the site would contain an intact lithic activity area. Unit dimensions measured 1 x 1 m and a datum was established 9 cm above surface in the northeast corner. The unit was then excavated in nine, 10-cm arbitrary levels to a depth of 99 cm below datum. The general soil profile encountered during unit excavation consisted of an 8 to 15 cm thick layer of gray (10YR 5/1) sand (Stratum I) overlying a 30 to 35 cm thick layer of yellowish brown (10YR 6/6) sand (Stratum II). A thin lens consisting of dark brown (10YR 5/6) sand was present intermittently between the first and second strata. Stratum III consisted of a 16 to 25 cm thick layer of yellowish brown (10YR 6/8) sand. A profile drawing for Test Unit 7 is presented in Figure 48. Table 34 summarizes the distribution of artifact types recovered from Test Unit 7 by level.

Artifact recovery from Test Unit 7 was moderate to high and consisted of both prehistoric lithics and ceramics. Prehistoric ceramics were recovered between levels 1 and 6 but were most densely clustered between levels 3 and 4. Woodland Plain sherds dominated the collection with smaller quantities of Deptford, Cape Fear, and Pee Dee series sherds. It is presumed the single Deptford Check Stamped sherd, recovered from level 2, is affiliated with the larger Woodland series collection. Thus far, this pairing has been the consistent patterning for the Middle Woodland component at the site. Overlying the densest clustering of Woodland plain sherds was a minor Late Woodland component consisting of two Cape Fear series sherds. It appears the Middle and Late Woodland components have retained a good degree of vertical separation. We see some evidence of

Figure 48 Soil Profile for Test Unit 7



displacement with the recovery of a Pee Dee 2 plain sherd in level 4, although it is suspected this sherd may have fallen to the unit floor from the loose sand in the upper walls.

The lithic collection consists almost exclusively of debitage. The greatest concentration of artifacts occurred in levels 2 and 3, a vertical positioning indicating an association with either the Middle or Late Woodland ceramic component. No lithic diagnostics in the upper strata were recognized. Raw material composition included quartz, rhyolite and chert, however quartz was by far the predominant lithic raw material. Lithic debitage profiles indicate a full range of lithic reduction activities lending support for a discrete activity area involving lithic manufacture and possibly use if associated with the small collection of Cape Fear sherds found in level 2. Alternatively, if we associate the material with the Middle Woodland deposit in levels 3 and 4, then the collective output suggests secondary discard or trash disposal. Lastly, levels 6 and 7 (Stratum III) produced a small concentration of lithics and contained the only lithic tool recovered from Unit 7. The tool consists of a formal endscraper manufactured from chert and its recovery at this depth confirms the presence of a discrete Early or Middle Archaic component in this portion of the site. As previously mentioned, deeply buried lithic concentrations were also identified in Test Unit 3 and 4, both of which lie in close proximity to Test Unit 7.

RECOMMENDATIONS

Several salient site characteristics have become apparent during the course of field investigations and subsequent analyses at 38SU191. First, the site is much larger than previously thought. Well-preserved deposits extend a considerable distance east of the road and perimeter fence. Second, investigations have revealed an extensive site occupational history. Major occupations include Pee Dee (Mississippian), Santee (Late Woodland/Mississippian), Berkeley (Late Woodland), and Deptford (late Early/Middle Woodland), and a deeply buried Early or Middle Archaic lithic component. Thom's Creek (terminal Late Archaic) and Refuge (Early Woodland) components were also identified but represent relatively minor site occupations. Third, overall and component artifact density has a positive correlation with proximity to Brunson Swamp. This spatial patterning is evident in the total artifact density maps and was readily observable during artifact recovery along the exposed road surface. Fourth, the site exhibits a good degree of stratigraphic integrity. Apart from the few isolated incidences of displacement, overall vertical component separation has been preserved. Given the size, density, and the wide-ranging occupational history of the site, this level of vertical and horizontal integrity is rare and offers an excellent opportunity for addressing a number of research questions regarding temporal variation in site structure, regional settlement strategy, and chronology especially as it pertains to refining both Woodland and Mississippian ceramic phase sequences. Based on the information presented above, we recommend that Site 38SU191 be considered eligible for inclusion on the National Register of Historic Places.

Table 34. 38SU191 Test Unit 7 Artifact Types By Soil Strata and Excavation Level.

Stratum		1/11	II	II	11/111	III	III	III	III	
Levels	1	2	3	4	5	6	7	8	9	
Max. Depth (cmbs)	10	20	30	40	50	60	70	80	90	Totals
CERAMICS			100						Harry Co.	
Pee Dee 2 Comp. Plain	0	0	0	1	0	0	0	0	0	1
Cape Fear 1 Cord Marked	0	2	0	0	0	0	0	0	0	2
Deptford 1 Check Stamped	1	0	0	0	0	0	0	0	0	1

Stratum	1	1/11	II	II	11/111	III	III	III	III	
Levels	1	2	3	4	5	6	7	8	9	
Max. Depth (cmbs)	10	20	30	40	50	60	70	80	90	Totals
CERAMICS										
Woodland 2 Plain	0	2	8	7	3	1	0	0	0	21
Woodland 2 Indet.	0	0	1	0	0	0	0	0	0	
Woodland 1 Indet.	0	1	0	0	0	0	0	0	0	1
Sherdlet	0	0	0	1	0	0	0	0	0	PIE
Sub-totals	1	5	9	9	3	1	0	0	0	28
LITHICS										
Endscraper	0	0	0	0	0	0	1	0	0	
Primary Flake	0	3	1	0	0	0	0	0	0	4
Secondary Flake	0	5	4	0	0	0	0	0	0	9
Interior Flake	0	1	1	0	0	0	0	0	0	2
Tertiary Flake	0	23	17	3	1	3	0	0	0	47
Flake Frag.	0	3	2	1	0	1	0	0	0	7
Shatter/Chunk	0	0	2	0	0	0	0	0	0	2
Cortical Shatter	0	2	0	0	0	0	0	0	0	2
FCR	0	0	1	0	1	0	0	0	0	2
Quartz Cobble	0	0	0	0	0	0	0	0	0	0
Sub-totals	0	37	28	4	2	4	1	0	0	76
Grand Totals	ı	42	37	13	5	5		0	0	104

XI. PHASE II EVALUATIONS AND RECOMMENDATIONS

The assessment of significance of cultural resources properties in general is determined by the criteria for eligibility for nomination to the National Register of Historic Places that are set forth in 36 CFR 60.4. The Poinsett Range sites tested during the present project can be evaluated only under the fourth criterion of eligibility for nomination to the NRHP. Any consideration of a property under this criterion must address whether the property contains information that can contribute to our understanding of history or prehistory, and whether that information is important.

The 2003 Phase II evaluation program conducted at the Poinsett Range sites was designed to provide a full assessment of:

the content of the cultural deposits at each site (i.e., the range of artifactual and feature information available);

the integrity of the deposits at each site (i.e., the degree of disturbance, mixing, bioturbation, deflation, etc.) as measured by horizontal and vertical integrity, and, finally;

the context of the cultural deposits at each site, in relation to both the natural and cultural environment of the appropriate time period.

The fundamental data derived from the Phase II testing program at these sites can be used to evaluate each one in regard to its potential for increasing our knowledge of past lifeways and contributing to the resolution of regionally pertinent research topics for the South Carolina Coastal Plain. Characteristics of each of the present sample of tested sites at Poinsett Range that can be used to evaluate the National Register eligibility of the sites include: (1) the presence of horizontally and vertically discrete components that can be isolated and studied as analytical units; (2) the presence of intact features at the site with the potential for absolute dating; (3) the presence of partially reconstructable vessels at the site that are presumed to represent cached vessels with features (although the features may not always be identifiable); (4) the presence of preserved macrobotanical remains in the site deposits; (5) the presence of human remains at the site. When these data are tabulated by individual site, it allows us to make an informed decision regarding which sites have good research potential and valuable data sets, and which sites are most worth preserving for future investigation (Table 35).

Using these criteria, two of the Poinsett Range sites (38SU191 and 38SU222) are recommended eligible for inclusion in the NRHP. While the remaining one site 38SU58 contains some level of research potential, the recommended sites were chosen for a combination of the data sets present in the site deposits and specific components with good to excellent research potential. Some of these sites can yield important data pertaining to one component, while others can yield data pertinent to multiple components. Summarizing the table, sites 38SU191 and 38SU222 have cultural period deposits with excellent research potential.

Table 35. Site Significance Evaluation Table.

		1			Id	entif	ied (Comp	one	nts					ME							
	Data	Sets						Archaic		1 1 1 1	Ceramic Lare Archaic	Early		Generalized			Middle/Late	Woodland	Woodland		Mississippian	
Site Number	Features	Cached Vessels	Faunal Remains	Human Remains		Early	Middle	Nonceramic Late	Loilinghantifical	Unideniiiled	Creek	Dofine	panala	Woodland	Deptford		Cape Fear		Santee		Pee Dee	NRHP Evaluation
38SU58			x							x		x	×	(x				x	x		Not Eligible
38SU191	x		x		X				x	×		x	×	(x	x			х	x		Eligible
38SU222	×	x	x		x				x	×			×	(x	x		х	x	x		Eligible

Site 38SU191 contains four significant ceramic components reflecting a sequence of intensive site occupation from Deptford (Middle Woodland) to Pee Dee (Mississippian) cultures. Large assemblages of Cape Fear (Middle/Late Woodland) and Santee (Late Woodland/ Mississippian) ceramics are significant in that they can greatly contribute to our understanding of ceramic phase dynamics and sequencing in the Lower Wateree River Valley. Also significant is the identification of a midden deposit in Test Unit 4. The midden contained large quantities of Woodland and Deptford series sherds as well as a dense concentration of debitage composed primarily of orthoquartzite. In addition to the ceramic components was a deeply buried preceramic component consisting of three endscrapers and debitage. Although no diagnostics were identified, formal endscrapers are generally associated with Early and Middle Archaic contexts on the Coastal Plain. Consequently, the Early Archaic or Middle Archaic, Deptford, Cape Fear, Santee, and Pee Dee components contain important data concerning the prehistory of the region and thus are recommended as eligible for the NRHP.

Site 38SU222 contains major Deptford, Cape Fear, Santee, and Pee Dee ceramic components. Two culturally derived features were also identified including one cached Pee Dee vessel and one pit feature containing Cape Fear and Santee sherds, as well as faunal and lithic material. The presence of extensive Cape Fear and Santee assemblages is rare on the PECR and sites like 38SU222 are crucial for ceramic phase definition and for understanding the local prehistoric ceramic sequence. 38SU222 also contains a deeply buried Early Archaic component consisting of a discrete concentration of lithic debitage and tools. Lithic tools include a Taylor Side Notched PPK and a pitted anvil-stone. Artifact raw material, with the exception of the quartz anvil stone was comprised almost exclusively of Allendale chert. Given the unique site characteristics as outlined above, 38SU222 is recommended as **eligible** for the NRHP.

Site 38SU58 contains major generalized Woodland and Deptford ceramic components. Minor components of Thom's Creek, Refuge Santee and Pee Dee also were present. Although two small portions of the site contain some measure of integrity, disturbances resulting from the construction of the transmission line corridor have effectively diminished the overall research potential for 38SU58. Accordingly, our recommendation is that this site should be considered not eligible for inclusion in the NRHP.

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APPENDIX A: PREHISTORIC LITHICS

Condition Comments	Complete	Complete	Complete		Complete	Complete	Complete	Complete	Complete	Complete		Complete	Frag	Frag Weathered	Complete 5 m dogleash	5 m dogleash	Complete 5 m dogleash	Frag 5 m dogleash		Complete	Frag Weathered		Complete Heat-treated	Frag		Complete	Complete	Complete 2 pcieces. Weathered		Complete	Complete	Frag	Complete	5 m dogleash	Complete
Qty	-	2	_	—	_	_	_	_	-	_	_	_	-	_	-	_	_	_	-	-	-		-	—	3	_	_	-	-	-	-	-	_	-	-
Description	Rhyolite point (L.W./M. triangular)	Rhyolite tertiary flake	O'quartzite interior flake	O'quartzite flake frag	Allendale chert tertiary flake	Brown fossilif chert tertiary flake	Quartz tertiary flake	White fossilif chert tertiary flake	Rhyolite interior flake	White fossilif chert interior flake	White fossilif chert flake frag	O'quartzite interior flake	Quartz secondary flake	Chert biface thinning flake	Quartz tertiary flake	Quartz Shatter	Quartz biface thinning flake	Rhyolite tertiary flake	Quartz Shatter	Allendale chert tertiary flake	White fossilif chert tertiary flake	Quartzite FCR	Chert tertiary flake	Sandstone smoothing stone NCM	Quartz flake frag	Rhyolite tertiary flake	Quartz secondary flake	O'quartzite biface tertiary flake	Quartzite FCR	O'quartzite tertiary flake	Quartz tertiary flake	Quartz tertiary flake	Strat C 40 cmbs Blue-gray fossilif chert tertiary flake	2 FCR	Strat A-C? 62 cmbs Quartz secondary flake
Bag Provenience		1 Surface N460/E500	1 Surface N460/E500	1 Surface N460/E500	1 Surface N460/E500	1 Surface N460/E500	2 Surface N460/E520	2 Surface N460/E520	9 Surface N470/E500	9 Surface N470/E500	9 Surface N470/E500	14 Surface N510/E500	15 Surface N460/E510	15 Surface N460/E510	16 Surface N470/E510 A	16 Surface N470/E510 A	N470/E510	16 Surface N470/E510 A	N510/E480	18 Surface N470/E520 A	18 Surface N470/E520 A	18 Surface N470/E520 A	19 Surface N490/E520 A	22 Surface N460/E480	6 STP N500/E470 Strat C 80 cmbs	6 STP N500/E470 Strat C 90 cmbs	8 STP N490/E490 Strat C 50 cmbs	12 STP N490/E500 5 cmbs	16 STP N470/E510 B 20 cmbs	16 STP N470/E510 B 60 cmbs	17 STP N510/E480 B 35-40 cmbs	17 STP N510/E480 B 35-40 cmbs	18 STP N470/E520 B Strat C 40 cmb	19 STP N490/E520 B Top of Strat C 2 FCR	21 STP N450/E500 Strat A-C? 62 cmb
Site	385U58	385U58	385U58	385U58	385U58	385U58	385U58	385U58	385U58	385U58	385U58	385U58	385U58	385U58	385U58	385U58	385U58	385U58	385U58	385U58	385U58	385U58	385U58	385U58	38SU58	38SU58	38SU58	385U58	385U58	385U58	385U58	385U58	385U58	385U58	385U58

Pro ST ST	Provenience STP N450/E500 Strat A-C? 62 cmbs STP N490/E530 Strat C 45 cmbs	Description Quartz tertiary flake White fossilif chert tertiary flake	Qty	Condition Complete	Comments
STP N490/E530	Strat C 45	White fossilif chert shatter	·		
Unit 1 NE	/E330 Strat C 39 cmbs 4	Write Tossiii chert shatter Brown fossilif chert tertiary flake		Complete	
Unit 1 NE	5	Chrystal quartz tertiary flake	-	Complete	
Unit 1 NW	N 6	Quartz tertiary flake	_	Frag	
Unit 1 N	NW 6	White fossilif chert tertiary flake	_	Complete	
Unit 1 N	NW 6	White fossilif chert shatter	2		
Unit 1 S	SW 6	Quartz tertiary flake	_	Complete	Complete Thinning MD flk
Unit 1 NE	Е 6	Quartz flake frag	_		
Unit 1 N	NW >	Quartz tertiary flake	_	Complete	"banded" /chrystal-ish
Unit 1 N	NW 7	Blue-gray fossilif chert interior flake	—	Frag	
Unit 1 N	NW 7	White fossilif chert flake frag	_		
Unit 1 S	SW 7	Chrystal quartz tertiary flake	_	Complete	
Unit 1 N	NW 8	O'quartzite tertiary flake	_	Complete	
Unit 1 S	SW 8	Quartz tertiary flake microdeb	_	Complete	Thinning flk
Unit 1 S	SW 8	White fossilif chert shatter	_		
Unit 1 SE	E 8	Chrystal quartz tertiary flake	_	Complete	Chrystal-ish
Unit 1 S	SE 8	White fossilif chert tertiary flake	2	Complete	
Unit 1 SE	Е 8	O'quartzite tertiary flake microdeb	-	Complete	
Unit 1 NE	E 8	Quartz tertiary flake	4	Complete	3 Thinning MD flks
Unit 1 NE	Е 8	O'quartzite flake frag	_		
Unit 1 S	6 MS	Quartz tertiary flake microdeb	_	Complete	
Unit 1 S	6 3	Chrystal quartz tertiary flake microdeb	2	Complete	
Unit 2 N	NW 4	Chert tertiary flake	_	Complete	Heat-treated
Unit 2 S	E 4	Quartz cortial Shatter	_		
Unit 2 N	NE 4	White fossilif chert interior flake	_	Complete	
Unit 1 S	E 7	Chrystal quartz tertiary flake	_	Complete	
Unit 1 N	NE 7	Quartz tertiary flake	3	Complete	
Unit 1	NE 7	Brown fossilif chert tertiary flake	_	Frag	
STP N47	STP N470/E460 Strat C	Chert end scraper	-	Complete	
STP N52	N520/E540	Rhyolite point	-	Frag	Triangular
STP A-5	Strat C	Rhyolite interior flake	-	Split	
STP A-5	Strat C	Rhyolite tertiary flake	_	Complete	

STP A-5 Strat C STP N540/E620 Strat C 35-50 cml STP N580/E620 20-50cmbs STP N580/E620 A 3 STP N560/E620 A 3 STP N560/E620 A 4 3 STP N560/E620 B 5 3 STP N560/E620 C C	2		*	Complete	
N540/E620 N580/E620 N580/E620 N580/E620 N580/E620 N580/E620 N580/E620 N560/E620 N560/E620 N560/E620 N560/E620 N560/E620 N560/E620 N560/E620 N560/E620	2	White fossilit chert tertiary flake	_		
N580/E620 N580/E620 N580/E620 N580/E620 N580/E620 N580/E620 N560/E620 N560/E620 N560/E620 N560/E620 N560/E620 N560/E620 N560/E620 N560/E620 N560/E620	22	White fossilif chert tertiary flake thinning	_	Complete	
N580/E620 N580/E620 N580/E620 N580/E620 N580/E620 N580/E620 N560/E620 N560/E620 N560/E620 N560/E620 N560/E620 N560/E620 N560/E620 N560/E620		Quartz tertiary flake	_		
N580/E620 N580/E620 N580/E620 N580/E620 N580/E620 N560/E620 N560/E620 N560/E620 N560/E620 N560/E620 N560/E620 N560/E620		Quartz primary flake, cobble	_	Frag	
N580/E620 N580/E620 N580/E620 N580/E620 N500/E620 N560/E620 N560/E620 N560/E620 N560/E620 N560/E620 N560/E620 N560/E620		Quartz secondary flake	2	Complete	
N580/E620 N580/E620 N580/E620 N600/E620 N560/E620 N560/E620 N560/E620 N560/E620 N560/E620 N560/E620 N560/E620		Quartz tertiary flake	2	Complete	2 cortical
N580/E620 N580/E620 N580/E620 N600/E620 N560/E620 N560/E620 N560/E620 N560/E620 N560/E620 N560/E620		Quartz tertiary flake microdeb	9	Complete	
N580/E620 N580/E620 N600/E620 N560/E620 N560/E620 N560/E620 N560/E620 N560/E620 N560/E620 N560/E620		Quartz flake frag	2		
N580/E620 N600/E620 N560/E620 N560/E620 N560/E620 N560/E620 N560/E620 N560/E620		O'quartzite tertiary flake microdeb	-	Complete	
N600/E620 N560/E620 N560/E620 N560/E620 N560/E620 N560/E620 N560/E620 N560/E620		Quartzite FCR	_		
N560/E620 N560/E620 N560/E620 N560/E620 N560/E620 N560/E620 N560/E620		Allendale chert interior flake	_	Split	Wheathered
N560/E620 N560/E620 N560/E620 N560/E620 N560/E620 N560/E620 N560/E620		Allendale chert interior flake	1 (2 p	(2 pc Complete	
N560/E620 N560/E620 N560/E620 N560/E620 N560/E620 N560/E620		Allendale chert tertiary flake	-	Complete	
N560/E620 N560/E620 N560/E620 N560/E620 N560/E620		O'quartzite primary flake	-	Complete	
N560/E620 N560/E620 N560/E620 N560/E620 N560/E620		O'quartzite interior flake	1 (2 p	(2 pc Complete	
N560/E620 N560/E620 N560/E620 N560/E620		O'quartzite tertiary flake	2	Complete	
N560/E620 N560/E620 N560/E620		O'quartzite secondary flake	_	Split	
N560/E620 N560/E620		O'quartzite interior flake	_	Complete	
STP N560/E620 C		O'quartzite tertiary flake thinning	-	Complete	
	_	Brown fossilif chert tertiary flake	_	Complete	
STP N560/E620 C		O'quartzite tertiary flake	2	Complete	
STP N560/E620 D		Rhyolite tertiary flake thinning	_	Split	Wheathered/heat-treated
STP N560/E620 D		White fossilif chert tertiary flake microdeb	2	Complete	
STP N560/E620 D		O'quartzite tertiary flake	_	Complete	
STP N570/E630 A		Quartz tertiary flake	_	Complete	Cortex on platform
STP N570/E630 B		Quartz core	_	Complete	
STP N580/E630 B		Quartz flake frag	_		
STP N580/E630 B		Quartz tertiary flake	_	Complete	
STP N450/E500		Quartz secondary retouched flake	_	Complete	
STP N480/E490 Strat B/C		Quartz tertiary flake	_	Complete	
STP N570/E610 25-45 cmbs		Blue-gray fossilif chert interior flake	_	Complete	
STP N540/E600		Quartz primary flake	_	Complete	
STP N540/E600		Quartz secondary flake	-	Complete	
STP N540/E600		Quartz tertiary flake microdeb	-	Complete	
STP N540/E600		Quartz flake frag	_	Complete	

	Rhyolite tertiary flake thinning/ microdeb		Complete	
STP N550/E630 65-85 cmbs STP N550/E630 65-85 cmbs	White fossilif chert tertiary flake microdeb		Complete	
N550/E630	Rhyolite tertiary flake thinning		Complete	
STP N590/E600	FCR	-	Complete	
STP N520/E530 Strat C 50 cmbs	O'quartzite tertiary flake microdeb	_	Complete	
STP N520/E530 Strat C 51 cmbs	O'quartzite flake frag	_		
N610/E610 Strat	White fossilif chert tertiary flake microdeb	2	Complete	
STP N610/E610 Strat C	White fossilif chert tertiary flake	-	Frag	
STP N620/E600	Quartz biface	_	Frag	
STP N630/E610	White fossilif chert tertiary flake microdeb	_	Complete	
STP N630/E610	Rhyolite flake frag	-		
STP N660/E610 Strat C	White fossilif chert Shatter	-		
STP N660/E610 Strat C	O'quartzite tertiary flake	_	Complete	
STP N570/E620	Quartz cortial chunk	-	Complete	
STP N550/E600	O'quartzite tertiary flake	_	Complete	
STP N560/E600	Quartz tertiary flake	3	Complete	
STP N560/E600	Quartz shatter	_		
STP N640/E570 Strat C	Allendale chert biface frag	_		
STP N600/E580 Strat C 65 cmbs	Rhyolite (banded) tertiary flake	_	Complete	
STP N610/E580 Strat C	O'quartzite interior flake endscraper	_	Complete	
STP N650/E590	FCR	_∞		
Surface N490-80/E500 Road Coll	Quartz retouched flake	_		
Surface N490-80/E500 Road Coll	Quartz core	_	Frag	
Surface N490-80/E500 Road Coll	Quartz primary flake	3	Complete	
Surface N490-80/E500 Road Coll	Quartz secondary flake	_	Complete	
Surface N490-80/E500 Road Coll	Quartz interior flake	4	Complete	
Surface N490-80/E500 Road Coll	Quartz tertiary flake	8	Complete	
Surface N490-80/E500 Road Coll	Quartz tertiary flake microdeb	7	Complete	
Surface N490-80/E500 Road Coll	Quartz secondary flake	11	Complete	
Surface N490-80/E500 Road Coll	Quartz flake frag	3		
Surface N490-80/E500 Road Coll	Quartz flake frag microdeb	2		
Surface N490-80/E500 Road Coll	Quartz shatter microdeb	3		
Surface N490-80/E500 Road Coll	Grey chert flake frag	_		
Chaffee MAAO OO /FEOO Deed Coll		•	L	

Site Bag	Provenience	Description	Qty	Condition	Comments
38SU19157	Surface N440-30/E500 Road Coll	Quartz cortial chunk	-		
38SU19157	Surface N440-30/E500 Road Coll	Quartz primary flake	2	Complete	
38SU19157	Surface N440-30/E500 Road Coll	Quartz tertiary flake	4	Complete	
38SU19157	Surface N440-30/E500 Road Coll	Quartz tertiary flake microdeb	2	Complete	
38SU19157	Surface N440-30/E500 Road Coll	Quartz shatter	-		
38SU19157	Surface N440-30/E500 Road Coll	O'quartzite tertiary flake	_	Complete	
38SU19158	Surface N570-60/E500 Road Coll	Quartz secondary flake	-	Complete	
38SU19159	Surface N500-490/E500 Road Coll	Quartz primary flake/cobble chunk	-	Complete	
38SU19159	Surface N500-490/E500 Road Coll	Quartz primary flake	2	Complete	
38SU19159	Surface N500-490/E500 Road Coll	Quartz secondary flake	2	Complete	
38SU19159	Surface N500-490/E500 Road Coll	Quartz tertiary flake	3	Complete	Cortical platform
38SU19159	Surface N500-490/E500 Road Coll	Quartz tertiary flake	6	Complete	
38SU19159	Surface N500-490/E500 Road Coll	Quartz tertiary flake microdeb	7	Complete	
38SU19159	Surface N500-490/E500 Road Coll	Quartz flake frag	2	Split	
38SU19159	Surface N500-490/E500 Road Coll	Quartz shatter	_		
38SU19159	Surface N500-490/E500 Road Coll	Chert core	-	Frag	
38SU19160	Surface N460-50/E500 Road Coll	Quartz point	2	Frag	Woodland Triangular
38SU19160	Surface N460-50/E500 Road Coll	Quartz wedge	-	Frag	
38SU19160	Surface N460-50/E500 Road Coll	Quartz core frag	-	Complete	
38SU19160	Surface N460-50/E500 Road Coll	Quartz tertiary flake thinning	9	Complete	
38SU19160	Surface N460-50/E500 Road Coll	Quartz tertiary flake microdeb	6	Complete	
38SU19160	Surface N460-50/E500 Road Coll	Quartz shatter	2		
38SU19161	Surface N470-60/E500 Road Coll	Quartz retouched flake	-		
38SU19161	Surface N470-60/E500 Road Coll	Quartz primary flake	—	Complete	
38SU19161	Surface N470-60/E500 Road Coll	Quartz secondary flake	2	Complete	
38SU19161	Surface N470-60/E500 Road Coll	Quartz tertiary flake thinning	2	Complete	
38SU19161	Surface N470-60/E500 Road Coll	Quartz tertiary flake microdeb	12	Complete	
38SU19161	Surface N470-60/E500 Road Coll	Quartz flake frag	3		
38SU19161	Surface N470-60/E500 Road Coll	Quartz shatter	4		2 cortex
38SU19161	Surface N470-60/E500 Road Coll	Quartz shatter microdeb	4		
38SU19161	Surface N470-60/E500 Road Coll	Brown fossilif chert interior flake	-	Frag	
38SU19161	Surface N470-60/E500 Road Coll	Brown fossilif chert tertiary flake	_	Complete	
38SU19161	Surface N470-60/E500 Road Coll	Rhyolite tertiary flake	_	Complete	
91	Surface N480-70/E500 Road Coll	Quartz tool perforator/graver	_	Frag	
38SU19162	Surface N480-70/E500 Road Coll	Quartz core	-	Frag	

Site bag r	rioveilleille	Describuon	3		
38SU19187 §	Surface N470/E500 5m dogleash	Quartz tertiary flake	2	Complete	
38SU19188	Surface N500/E500 5m dogleash	Quartz primary flake	2	Complete	
38SU19188	Surface N500/E500 5m dogleash	Quartz tertiary flake	_	Complete	
38SU19190 S	Surface N510/E470 5m dogleash	O'quartzite biface scraper	-	Complete	
38SU19197	STP A-4 TRA/ST 4	Rhyolite bifacial drill	_	Frag	
38SU19197	STP A-4 TRA/ST 5	Allendale chert tertiary flake	_	Complete	Wheathered
38SU19197	STP A-4 TRA/ST 6	O'quartzite tertiary flake	-	Complete	
38SU19199	STP N450/E490	Quartz tertiary flake	-	Complete	
38SU191101 S	STP N550/E640 Strat C	White fossilif chert primary flake	_	Complete	
38SU191103 S	STP N530/E600	Allendale chert flake frag	_		
38SU191105 S	STP N530/E580	O'quartzite shatter	_		
38SU191106	STP N570/E650	Rhyolite tertiary flake	2	Complete	
38SU191106	STP N570/E650	Rhyolite tertiary flake	_	Frag	
38SU191106	STP N570/E651	Rhyolite flake frag	2		
38SU191115 L	Unit 3A SW 3	Rhyolite tertiary flake	2	Complete	
38SU191116 L	Unit 3A SE 3	Quartz tertiary flake	-	Complete	
38SU191116 L	Unit 3A SE 3	Rhyolite tuff tertiary flake	-	Complete	Cortex on platform
91117	Unit 3B NE 3	Rhyolite tertiary flake	-	Complete	
38SU191118 L	Unit 3B SE 3	Rhyolite tertiary flake	_	Complete	
38SU191118 L	Unit 3B SE 3	O'quartzite flake frag	_		
38SU191119 L	Unit 3A NW 4	Rhyolite tertiary flake thinning	3	Complete	
38SU191119 U	Unit 3A NW 4	O'quartzite shatter	3		
38SU191119 L	Unit 3A NW 4	O'quartzite flake frag	_	Complete	
38SU191120 L	Unit 3A NE 4	Chrystal quartz tertiary flake	_	Complete	
38SU191121 L	Unit 3A SW 4	Quartzite FCR	2		
38SU191122 L	Unit 3A SE 4	Rhyolite tuff tertiary flake thinning	_	Complete	
38SU191123 L	Unit 3B NW 4	Rhyolite tertiary flake	2	Complete	
38SU191124 L	Unit 3B NE 4	Quartz shatter	_		
38SU191124 L	Unit 3B NE 4	O'quartzite blade like flake	_	Frag	
38SU191124 L	Unit 3B NE 4	O'quartzite tertiary flake	_	Complete	
8SU191124	Unit 3B NE 4	Rhyolite tertiary flake thinning/microdeb	3	Complete	
38SU191124 L	Unit 3B NE 4	Quartzite FCR	4	Crumbs	
38SU191125 L	Unit 3B SW 4	Brown fossilif chert core frag	_		Cortical
2	Unit 3B SW 4	Rhyolite tertiary flake thinning/microdeb	-	Complete	
851191125	Unit 3B SW 4	O'quartzite shatter	2		

Site Bag Provenience	Description	Qty	Condition	Comments
38SU191126 Unit 3B SE 4	Rhyolite tertiary flake microdeb	-	Complete	
38SU191127 Unit 3A NW 5	Quartz point (misidentified and Missing?)	—	Frag	
38SU191127 Unit 3A NW 5	Quartzite FMR	_		
38SU191128 Unit 3A NE 5	Quartzite primary flake	_	Complete	
38SU191129 Unit 3A SW 5	Rhyolite tuff tertiary flake microdeb	_	Complete	
38SU191131 Unit 3B NW 5	Brown fossilif chert point Bradley Spike	_	Complete	Middle Woodland
38SU191131 Unit 3B NW 5	Chert tertiary flake	_	Complete	Wheathered/heat-treated
38SU191131 Unit 3B NW 5	Chert shatter	_		Wheathered/heat-treated
38SU191131 Unit 3B NW 5	Quartzite FMR	-		
38SU191132 Unit 3B NE 5	Chert tertiary flake	_	Complete	Wheathered/heat-treated
38SU191132 Unit 3B NE 5	O'quartzite Shatter	_		
38SU191133 Unit 3B SE 5	O'quartzite tertiary flake	_	Complete	2 x 2.4 cm
38SU191134 Unit 3A SW 6	White fossilif chert tertiary flake	_	Complete	
38SU191135 Unit 3A SE 6	Rhyolite tuff tertiary flake	_	Complete	
38SU191136 Unit 3B NW 6	O'quartzite tertiary flake	_	Complete	
38SU191137 Unit 3B NE 6	White fossilif chert tertiary flake	-	Complete	
38SU191138 Unit 3A SW 7	White fossilif chert interior flake	_	Complete	
38SU191138 Unit 3A SW 7	White fossilif chert tertiary flake thinning/mici	-1	Complete	
38SU191139 Unit 3A SE 7	Quartz tertiary flake thinning	_	Complete	
38SU191139 Unit 3A SE 7	O'quartzite tertiary flake	_	Complete	Cortical
38SU191140 Unit 3B NW 7	Bluish-Gray fossilif chert secondary flake	1	Complete	4.4 x 3.1 cm
38SU191140 Unit 3B NW 7	Bluish-Gray fossilif chert tertiary flake	_	Complete	
91140 Unit	White fossilif chert tertiary flake	-	Complete	
91140 Unit	O'quartzite tertiary flake	_	Complete	
91141 Unit	White fossilif chert tertiary flake	_	Complete	Cortical
91 142 Unit	Chert tertiary flake thinning	2	Complete	
38SU191143 Unit 3B SE 7	Quartz tertiary flake thinning/microdeb	_	Complete	
38SU191143 Unit 3B SE 7	Bluish-gray fossilif chert primary flake	_	Complete	3.4 x 3.9 cm
38SU191144 Unit 3A NW 8	White fossilif chert interior flake	_	Complete	
38SU191145 Unit 3A NE 8	Quartz tertiary flake microdeb	2	Complete	
38SU191146 Unit 3A SW 8	Brown fossilif chert shatter	_	Complete	
38SU191147 Unit 3B NE 8	Brown fossilif chert primary flake	_	Complete	1.6 x 0.7 cm
38SU191148 Unit 3B SW 8	Quartz tertiary flake	_	Complete	
38SU191148 Unit 3B SW 8	White fossilif chert shatter	_	Complete	
38SU191149 Unit 3B SE 8	White fossilif chert tertiary flake	2	Complete	

Site Bag Provenience	Description	Qty	Condition	Comments
U191151	Quartz tertiary flake	-	Complete	Roze qtz or heat-treated
91151 Unit 3B S wall	Rhyolite flake frag	_		
38SU191153 Unit 4A NE 3	O'quartzite interior flake	-	Complete	
38SU191153 Unit 4A NE 3	O'quartzite tertiary flake	4	Complete	
38SU191153 Unit 4A NE 3	O'quartzite tertiary flake thinning/microdeb	2	Complete	
38SU191154 Unit 4A SW 3	O'quartzite tertiary flake	_	Split	
38SU191155 Unit 4A SE 3	Rhyolite tuff interior flake	_	Complete	
38SU191155 Unit 4A SE 3	Rhyolite tuff tertiary flake	_	Frag	
38SU191155 Unit 4A SE 3	O'quartzite interior flake	_	Complete	
38SU191156 Unit 4B NW 3 26-36cmbs	O'quartzite interior flake	_	Complete	
38SU191156 Unit 4B NW 3 26-36cmbs	O'quartzite tertiary flake	2	Complete	
38SU191157 Unit 4B NE 3	O'quartzite tertiary flake	2	Complete	
38SU191158 Unit 4B SW 3	O'quartzite interior flake	—	Complete	
38SU191158 Unit 4B SW 3	O'quartzite tertiary flake	2	Complete	
38SU191160 Unit 4A NW 4	Brown fossilif chert tertiary flake thinning	_	Complete	
38SU191161 Unit 4A NE 4	O'quartzite unidentified flake	_	Frag	
38SU191161 Unit 4A NE 4	O'quartzite tertiary flake	_	Complete	
38SU191162 Unit 4A SW 4	Rhyolite interior flake utilized	_	Complete	
38SU191163 Unit 4A SE 4	O'quartzite tertiary flake	-	Complete	
38SU191164 Unit 4B NW 4	O'quartzite secondary flake	-	Complete	
38SU191164 Unit 4B NW 4	O'quartzite interior flake	3	Complete	
38SU191164 Unit 4B NW 4	O'quartzite tertiary flake	3	Complete	
38SU191164 Unit 4B NW 4	O'quartzite tertiary flake thinning/microdeb	4	Complete	
38SU191164 Unit 4B NW 4	O'quartzite flake frag	-	Complete	
38SU191165 Unit 4B NE 4	Rhyolite interior flake	_	Complete	Weathered
38SU191165 Unit 4B NE 4	O'quartzite interior flake	2	Complete	
38SU191165 Unit 4B NE 4	O'quartzite interior flake	-	Split	
38SU191165 Unit 4B NE 4	O'quartzite tertiary flake	-	Complete	
38SU191166 Unit 4B SW 4	O'quartzite interior flake	_	Complete	$3.4 \times 2.6 \text{ cm}$
38SU191166 Unit 4B SW 4	O'quartzite tertiary flake	9	Complete	
38SU191166 Unit 4B SW 4	O'quartzite tertiary flake thinning	3	Complete	
38SU191166 Unit 4B SW 4	O'quartzite flake frag	-		
38SU191167 Unit 4B SE 4	O'quartzite primary flake	2	Complete	
38SU191167 Unit 4B SE 4	O'quartzite interior flake	2	Complete	
38SU191167 Unit 4B SE 4	O'quartzite interior flake	-	Frag	

Condition Comments	Complete	Complete			Complete	Complete		Complete		Complete		Complete	Complete			Complete Heat-treated	Complete	Complete		Complete 4 x 2.3 cm	Complete		Complete	Complete		Frag Triangular	olete	Complete	Split	Complete	Frag	Complete		$3.5 \times 4.2 \times 2$ cm	Complete
Qty	9	9	_	_	2	3	—	_	2	_	_	2	3	_	_	_	_	2	2	1	—	_	2	_	_	_	-	5	_	10	-	8	2	_	_
Description	O'quartzite tertiary flake	O'quartzite tertiary flake, thinning	O'quartzite flake frag	O'quartzite shatter	Rhyolite tuff tertiary flake	Blue-gray fossilif chert tertiary flake	Chert flake frag	O'quartzite tertiary flake	Quartzite FCR	O'quartzite tertiary flake thinning/microdeb	Quartzite FCR	Quartz tertiary flake thinning	O'quartzite tertiary flake thinning	Quartzite FCR	Quartz Shatter	Chert tertiary flake	O'quartzite interior flake	O'quartzite tertiary flake	Quartzite FCR	Rhyolite interior flake	Rhyolite tuff tertiary flake	Rhyolite tuff flake frag	O'quartzite tertiary flake	Quartz core	Quartzite broken cobble	O'quartzite point	O'quartzite secondary flake	O'quartzite interior flake	O'quartzite interior flake	O'quartzite tertiary flake	O'quartzite tertiary flake	O'quartzite tertiary flake thinning	O'quartzite shatter	O'quartzite primary flake	O'quartzite interior flake
Site Bag Provenience	38SU191167 Unit 4B SE 4	38SU191167 Unit 4B SE 4	38SU191167 Unit 4B SE 4	38SU191167 Unit 4B SE 4	38SU191167 Unit 4B SE 4	38SU191168 Unit 4A NW 5	38SU191168 Unit 4A NW 5	38SU191168 Unit 4A NW 5	38SU191168 Unit 4A NW 5	38SU191169 Unit 4A NE 5	38SU191169 Unit 4A NE 5	38SU191170 Unit 4A SW 5	38SU191170 Unit 4A SW 5	38SU191170 Unit 4A SW 5	38SU191172 Unit 4B NW 5	38SU191172 Unit 4B NW 5	91	38SU191172 Unit 4B NW 5	38SU191172 Unit 4B NW 5	38SU191173 Unit 4B NE 5	38SU191173 Unit 4B NE 5	38SU191173 Unit 4B NE 5	38SU191173 Unit 4B NE 5	38SU191174 Unit 4B SW 5	38SU191174 Unit 4B SW 5	38SU191174 Unit 4B SW 5	38SU191174 Unit 4B SW 5	38SU191174 Unit 4B SW 5	38SU191174 Unit 4B SW 5	38SU191174 Unit 4B SW 5	38SU191174 Unit 4B SW 5	38SU191174 Unit 4B SW 5	38SU191174 Unit 4B SW 5	8SU191175 Unit 4B SE	38SU191175 Unit 4B SE 5 46-56cmbs

one pag Provenience	Description	לוא	COLIGICION	COLLINELLES
38SU191175 Unit 4B SE 5 46-56cmbs	O'quartzite tertiary flake	8	Complete	
38SU191175 Unit 4B SE 5 46-56cmbs	O'quartzite tertiary flake thinning	9	Complete	
38SU191175 Unit 4B SE 5 46-56cmbs	Rhyolite interior flake	3	Complete	
38SU191175 Unit 4B SE 5 46-56cmbs	Chert flake frag	_		Weathered/heat-treated
38SU191176 Unit 4A NW 6	White fossilif chert tertiary flake	2	Complete	
38SU191177 Unit 4A NE 6	Quartz cobble chunk	_		
38SU191177 Unit 4A NE 6	O'quartzite tertiary flake	2	Complete	
38SU191177 Unit 4A NE 6	Rhyolite tertiary flake	_	Complete	
38SU191178 Unit 4A SW 6	Chert tertiary flake	_	Complete	unid. Chert
38SU191179 Unit 4B NW 6	O'quartzite interior flake	-	Complete	
38SU191180 Unit 4B NE 6	O'quartzite interior flake	3	Complete	3.1×3.5 cm, 2.1×2.9 cm
38SU191180 Unit 4B NE 6	O'quartzite tertiary flake,thinning/microdeb.	4	Complete	
38SU191180 Unit 4B NE 6	O'quartzite flake frag	2		
38SU191181 Unit 4A NW 7	Quartz shatter	-		
38SU191181 Unit 4A NW 7	Quartzite FCR	2		
38SU191182 Unit 4A NE 7	Quartz tertiary flake	_	Complete	Cortical
38SU191182 Unit 4A NE 7	O'quartzite cortial chunk	_		3.5×2.7 cm, Weathered
38SU191182 Unit 4A NE 7	Quartzite FCR	-		
38SU191183 Unit 4A SE 7	Blue-Gray fossilif chert shatter	-		
38SU191183 Unit 4A SE 7	Quartzite FCR	-		
38SU191184 Unit 4B NE 7	Quartz shatter	_		
38SU191184 Unit 4B NE 7	Rhyolite tuff interior flake	_	Complete	
38SU191185 Unit 4B SW 7	O'quartzite tertiary flake, thinning	_	Complete	
38SU191186 Unit 4B SE 7	Quartz primary flake	_	Complete	
38SU191186 Unit 4B SE 7	Blue-Gray fossilif chert interior flake	_	Complete	
38SU191186 Unit 4B SE 7	O'quartzite tertiary flake	2	Complete	
38SU191186 Unit 4B SE 7	O'quartzite chunk/shatter	_		
38SU191187 Unit 4A NW 8	Brown fossilif chert tertiary flake thinning	_	Complete	
38SU191187 Unit 4A NW 8	O'quartzite tertiary flake thinning	-	Complete	
38SU191188 Unit 4A NE 8	Brown fossilif chert flake frag	_		
38SU191189 Unit 4A SW 8	Quartz tertiary flake	_	Complete	Roze qtz
38SU191189 Unit 4A SW 8	White fossilif chert interior flake	_	Complete	4.1 x 2.3 cm
38SU191189 Unit 4A SW 8	White fossilif chert tertiary flake	-	Complete	Weathered
38SU191190 Unit 4A SE 8	Blue-gray fossilif chert tertiary flake	_	Complete	
20C1101100 112 4 A CE 0	White foodilif chart coation obottor	,		

Site Bag Provenience	Description	Oty Con	Condition Comments	
	Quartzite FCR	3		
38SU191225 Unit 5B NE 6	Quartzite FCR	4		
38SU191 225 Unit 5B NE 6	O'quartzite FCR	2		
38SU191226 Unit 5B SW 6	Quartzite FCR	3		
38SU191227 Unit 5A NE 7	White fossilif chert tertiary flake thinning/micı		Complete	
38SU191228 Unit 5A NW 8	O'quartzite abrading stone?	1 Frag		
38SU191229 Unit 5A NE 8	White fossilif chert tertiary flake	1 Con	Complete Wheathered	p.
38SU191230 Unit 5A SW 8	Sandstone interior flake	1 Con	Complete 4.3 cm lon	4.3 cm long. Cort. Platform
38SU191236 Unit 6 SE 5	Quartzite FCR	1	4.8 x 3.4 cm	m:
38SU191238 Unit 7 NW 2	Quartz tertiary flake thinning	8 Con	Complete 1 Chrystal qtz	qtz
38SU191238 Unit 7 NW 2	Quartz cortial shatter	_		
38SU191238 Unit 7 NW 2	Rhyolite tertiary flake thinning/microdeb	1 Con	Complete	
38SU191239 Unit 7 NE 2	Quartz tertiary flake	1 Con	Complete Cortex on platform	platform
38SU191 240 Unit 7 SW 2	Quartz primary flake	2 Con	Complete	
38SU191 240 Unit 7 SW 2	Quartz secondary flake	3 Con	Complete	
38SU191 240 Unit 7 SW 2	Quartz cortial shatter	1		
38SU191240 Unit 7 SW 2	Quartz tertiary flake	5 Con	Complete	
38SU191 240 Unit 7 SW 2	Quartz tertiary flake microdeb	1 Split		
38SU191 240 Unit 7 SW 2	Quartz flake frag	2		
38SU191241 Unit 7 SE 2	Quartz primary flake	1 Con	Complete	
38SU191241 Unit 7 SE 2	Quartz secondary flake	2 Con	Complete	
38SU191241 Unit 7 SE 2	Quartz interior flake	1 Con	Complete	
38SU191241 Unit 7 SE 2	Quartz tertiary flake	3 Con	Complete	
38SU191241 Unit 7 SE 2	Quartz tertiary flake thinning/microdeb	4 Con	Complete	
38SU191241 Unit 7 SE 2	Quartz flake frag	1 Con	Complete	
38SU191242 Unit 7 NE 3	Quartz primary flake	2 Con	Complete Tertiary	
38SU191242 Unit 7 NE 3	Quartz secondary flake	2 Con	Complete	
38SU191242 Unit 7 NE 3	Quartz tertiary flake	1 Con	Complete	
38SU191242 Unit 7 NE 3	Quartz flake frag	2		
38SU191242 Unit 7 NE 3	Rhyolite tertiary flake thinning	1 Con	Complete	
38SU191242 Unit 7 NE 3	Rhyolite tertiary flake	1 Frag		
38SU191243 Unit 7 SW 3	Quartz interior flake	1 Con	Complete	
38SU191 243 Unit 7 SW 3	Quartz tertiary flake	3 Con	Complete	
38SU191243 Unit 7 SW 3	Quartz tertiary flake	1 Frag	Cortical	
38SU191243 Unit 7 SW 3	Quartz shatter	2		

91 243 Unit 7 SW 3 91 244 Unit 7 SE 3 91 245 Unit 7 NW 3 91 249 Unit 7 NW 4 91 249 Unit 7 NW 5 91 250 Unit 7 NW 5 91 250 Unit 7 NW 7 91 250 Unit 7 NW 7 91 250 Unit 7 NW 7 91 250 Unit 2 NW 7 91 250 Unit 2 NW 7 91 250 Unit 3 N NW 7 91 250 Unit 3 N NW 3 91 250 Unit 4 N S E 6 91 250 Unit 5 N N S OVE 440 Strat C 91 250 Unit 4 N S E 6 91 250 Unit 5 N N S OVE 440 Strat C 91 250 Unit 5 N N S OVE 440 Strat C 91 250 Unit 5 N N S OVE 440 Strat C 91 250 Unit 5 N N S OVE 440 Strat C 91 250 Unit 5 N N S OVE 440 Strat C 91 250 Unit 5 N N S OVE 440 Strat C 91 250 Unit 5 N N S OVE 440 Strat C 91 250 Unit 5 N N S OVE 440 Strat C 91 250 Unit 5 N S OVE 440 Strat C 91 250 Unit 5 N S OVE 440 Strat C 91 250 Unit 5 N S OVE 440 Strat C 91 250 Unit 5 N S OVE 440 Strat C 91 250 Unit 5 N S OVE 440 Strat C 91 250 Unit 5 N S OVE 450 Strat C 91 250 Unit 5 N S OVE 50 Strat C 91 250 U	Site Bag Provenience	Description	Qty	Condition	Comments
1244 Unit 7 SE 3 Quartz primary flake 1	243 Unit 7	Quartzite FCR	-		
1244 Unit 7 SE 3 Quartz tertiary flake 1	244 Unit 7	Quartz primary flake	_	Frag	
244 Unit 7 SE 3	244 Unit 7	Quartz tertiary flake	-	Complete	Cortical
244 Unit 7 SE 3 Quartz tertiary flake thinning 6 246 Unit 7 NE 6 Rhyolite tertiary flake 3 248 Unit 7 NW 3 Quartz tertiary flake 3 248 Unit 7 NW 4 Quartz tertiary flake 3 250 Unit 7 NW 5 Quartz tertiary flake frag 3 251 Unit 7 SW 5 Quartz tertiary flake frag 3 252 Unit 7 SW 6 Rhyolite flake frag 3 253 Unit 2 NE 2 Quartz tertiary flake 3 254 Unit 2 NE 2 Quartz tertiary flake 3 255 Unit 2 NE 2 Quartz tertiary flake 3 255 Unit 2 NE 2 Quartz tertiary flake 3 256 Unit 2 NE 2 Quartz tertiary flake 3 259 Unit 3 N W 3 Rhyolite tertiary flake 1 259 Unit 3 N W 3 Quartz tertiary flake 1 250 Unit 4 B SE 6 Quartz tertiary flake 1 250 Unit 3 N W 3 Quartz tertiary flake 1 250 Unit 4 B SE 6 Quartz tertiary flake 1 250 Unit 4 B SE 6 Quartz tertiary flake microdeb 1 250 Unit 4 B SE 6 Quartz tertiary flake 1 250 Unit 4 B SE 6 Quartz tertiary flake microdeb 2 251 STP NS30/E490 Strat C Quartz tertiary flake microdeb 2 252 STP NS50/E490 Strat C Quartz tertiary flake microdeb 2 253 STP NS30/E490 Strat C Quartz tertiary flake 2 254 STP NS50/E490 Strat C Quartz tertiary flake 2 255 STP NS50/E490 Strat C Quartz tertiary flake 2 256 STP NS50/E500 Quartz tertiary flake 2 257 Surface NS50/E500 Quartz tertiary flake 2 258 Surface NS50/E500 Quartz secondary flake 2 258 Surface NS50/E500 Quartz secondary flake 2 259 Surface NS50/E500 Quartz secondary flake 2 250 Surface NS5	244 Unit 7	Quartz tertiary flake	2	Complete	
1246 Unit 7 NE 6 Rhyolite tertiary flake 3 247 Unit 7 NW 3 Quartz tertiary flake 1 248 Unit 7 NW 4 Quartz tertiary flake 1 250 Unit 7 NW 4 Quartz tertiary flake 1 251 Unit 7 NW 5 Quartz tertiary flake thinning 1 252 Unit 7 NW 5 Quartz tertiary flake thinning 1 253 Unit 7 NW 7 Quartz tertiary flake thinning 1 254 Unit 2 NE 2 Quartz perforator/graver 1 256 Unit 2 NE 2 Quartz perforator/graver 1 258 Unit 2 NE 2 Quartz tertiary flake 1 259 Unit 3 N WW 3 Quartz tertiary flake 1 259 Unit 3 N WW 3 Quartz tertiary flake 1 250 Unit 3 N WW 3 Quartz tertiary flake 1 250 Unit 3 N WW 3 Quartz tertiary flake frag 0 Quartz tertiary flake 1 250 Unit 4 B SE 6 Quartz tertiary flake microdeb 1 250 Unit 4 B SE 6 Quartz tertiary flake microdeb 1 250 Unit 4 B SE 6 Quartz tertiary flake microdeb 1 250 Unit 4 B SE 6 Quartz tertiary flake microdeb 2 2 2 2 2 2 2 2 2	91244 Unit 7	Quartz tertiary flake thinning	9	Complete	
247 Unit 7 NW 3 Quartz tertiary flake 1	91246 Unit 7	Rhyolite tertiary flake	3	Complete	Thin
248 Unit 7 NW 4 Quartz tertiary flake 3 248 Unit 7 NW 4 Quartz flake frag 255 Unit 7 NW 5 Quartz flake frag 252 Unit 7 SW 5 Quartz tertiary flake thinning 255 Unit 2 NW 5 Quartz tertiary flake frag 255 Unit 2 NW 2 Quartz perforator/graver 255 Unit 2 NW 3 Quartz perforator/graver 255 Unit 3 A NW 3 Quartz primary flake microdeb 257 Surface N560/E500 Quartz primary flake microdeb 258 Surface N560/E500 Quartz primary flake 259 Surface N560/E500 Quartz primary flake 250 Surface N560/E500 Quartz prima	91247 Unit 7	Quartz tertiary flake	_	Complete	
248 Unit 7 NW 4 Quartz flake frag Quartz flake frag Quartz flake frag Quartz tertrary flake thinning Quartz tertrary flake thinning Quartz tertrary flake thinning Quartz tertrary flake Quartz perforator/graver Quartz	91248 Unit 7	Quartz tertiary flake	3	Complete	At least 2 thinning flks
250 Unit 7 NE 5 Quartzite FCR 1251 Unit 7 SW 5 Quartz tertiary flake thinning 1252 Unit 7 SW 6 Quartz tertiary flake frag 1253 Unit 7 NW 7 Chert endscraper 1256 Unit 2 NE 2 Quartz perforator/graver 1256 Unit 2 NE 2 Quartz perforator/graver 1259 Unit 3 NW 3 Quartz primary flake 1259 Unit 3 NW 3 Quartz primary flake 1250 Unit 4B SE 6 Quar	91248 Unit 7	Quartz flake frag	_		
255 Unit 7 SW 5 Quartz tertiary flake thinning 1 252 Unit 7 SW 6 Rhyolite flake frag 1 253 Unit 7 SW 6 Chert endscraper 1 254 Unit 2 NB 7 Quartz perforator/graver 1 254 Unit 2 NB 2 Quartz perforator/graver 1 255 Unit 2 NB 3 Quartz tertiary flake 1 258 Unit 3 NW 3 Quartz tertiary flake 1 259 Unit 3 NW 3 Rhyolite tertiary flake 1 259 Unit 3 NW 3 Rhyolite tertiary flake 1 250 Unit 3 NW 3 Quartz tertiary flake 1 250 Unit 4 B SE 6 O'quartzite tertiary flake 1 250 Unit 4 B SE 6 O'quartzite tertiary flake 1 250 Unit 4 B SE 6 O'quartzite tertiary flake 1 250 Unit 4 B SE 6 O'quartzite grinding/nut stone 2 2 2 2 2 2 2 2 2	91250 Unit 7	Quartzite FCR	_		
252 Unit 7 SW 6	91251 Unit 7	Quartz tertiary flake thinning	_	Complete	
255 Unit 7 NW 7 Chert endscraper	91252 Unit 7	Rhyolite flake frag	-	•	
91 256 Unit 2 NE 2 Quartz perforator/graver 1 91 256 Unit 2 NE 2 Quartz secondary flake 1 91 259 Unit 2 NW 3 Quartz tertiary flake 1 91 259 Unit 3A NW 3 Rhyolite biface tip 1 91 259 Unit 3A NW 3 Rhyolite tertiary flake 1 91 259 Unit 3A NW 3 O'quartzite flake frag 1 91 250 Unit 3A NW 3 O'quartzite flake frag 1 91 250 Unit 4B SE 6 O'quartzite flake frag 1 91 260 Unit 4B SE 6 O'quartzite tertiary flake 1 91 260 Unit 4B SE 6 O'quartzite shatter 1 22 STP NS30/E490 Strat C Quartzite grinding/nut stone 1 22 STP NS30/E490 Strat C Quartz tertiary flake microdeb 1 22 STP NS60/E490 Strat C Quartz tertiary flake microdeb 2 22 STP NS60/E490 Strat C Quartz tertiary flake microdeb 2 22 STP NS60/E490 Strat C Quartz tertiary flake frag 2 22 Surface NS60/E500 Quartz primary flake 1 22 Surface NS60/E500 Quartz primary flake 1 23 Surface NS4	91253 Unit 7	Chert endscraper	_	Complete	
91 256 Unit 2 NE 2 Quartz secondary flake 1 91 258 Unit 2 NW 3 Quartz tertiary flake 1 91 259 Unit 3A NW 3 Rhyolite biface tip 1 91 259 Unit 3A NW 3 Rhyolite tertiary flake 1 91 259 Unit 3A NW 3 O'quartzite flake frag 1 91 250 Unit 3A NW 3 O'quartzite flake frag 1 91 250 Unit 4B SE 6 O'quartzite flake frag 1 91 260 Unit 4B SE 6 O'quartzite shatter 1 91 260 Unit 4B SE 6 O'quartzite shatter 1 22 3 STP N530/E490 Strat C Quartzite shatter 1 22 3 STP N530/E490 Strat C Quartz tertiary flake microdeb 2 22 5 STP N560/E490 Strat C Quartz secondary flake microdeb 2 22 6 STP N560/E490 Strat C Quartz tertiary flake microdeb 2 22 6 STP N560/E490 Strat C Quartz tertiary flake frag 2 22 5 Surface N560/E500 Quartz primary flake 1 22 5 Surface N560/E500 Quartz primary flake 1 23 6 Surface N540/E500 Quartz primary flake 2 24 6 Correct seco	91256 Unit 2 NE	Quartz perforator/graver	_	Frag	
91 258 Unit 2 NW 3 Quartz tertiary flake 1 91 259 Unit 3A NW 3 Rhyolite biface tip 1 91 259 Unit 3A NW 3 Rhyolite tertiary flake 1 91 259 Unit 3A NW 3 O'quartzite flake frag 1 91 260 Unit 4B SE 6 O'quartzite flake frag 1 91 260 Unit 4B SE 6 O'quartzite shatter 1 22 3 STP N530/E490 Strat C Quartzite grinding/nut stone 1 22 3 STP N530/E490 Strat C Allendale chert tertiary flake microdeb 1 22 3 STP N560/E490 Strat C Quartz tertiary flake microdeb 2 22 5 STP N560/E490 Strat C Quartz tertiary flake microdeb 2 22 6 STP N560/E490 Strat C Quartz tertiary flake microdeb 2 22 6 STP N560/E490 Strat C Quartz primary flake forget 1 22 6 STP N560/E490 Strat C Quartz primary flake forget 1 22 6 STP N560/E500 Quartz primary flake 0 0 22 7 Surface N560/E501 Quartz primary flake 1 22 8 Surface N560/E500 Quartz primary flake 1 23 8 Surface N540/E500 Quartz primary flake 2 24 Quartz primary	91256 Unit 2 NE	Quartz secondary flake	_	Complete	
259 Unit 3A NW 3 259 Unit 3A NW 3 259 Unit 3A NW 3 260 Unit 4B SE 6 270 Quartzite tertiary flake 3 STP N530/E490 Strat C 4 Allendale chert tertiary flake microdeb 3 STP N550/E490 Strat C 4 Allendale chert tertiary flake microdeb 3 STP N550/E490 Strat C 4 Quartz tertiary flake microdeb 5 STP N560/E500 Quartz tertiary flake 6 STP N560/E500 Quartz primary flake 7 Surface N560/E501 Quartz secondary flake 8 Surface N540/E500 Quartz primary flake 9 Surface N540/E500 Quartz primary flake	91258 Unit	Quartz tertiary flake	_	Complete	
259 Unit 3A NW 3 259 Unit 3A NW 3 260 Unit 3A NW 3 260 Unit 4B SE 6 270 Unit 4B SE 6 280 O'quartzite tertiary flake 381 STP N530/E490 Strat C 381 STP N530/E490 Strat C 382 STP N550/E490 Strat C 383 STP N560/E490 Strat C 384 Surface N560/E500 385 STP N560/E490 Strat C 386 Surface N560/E500 386 Surface N560/E500 387 Surface N560/E500 388 Surface N560/E500 398 Surface N560/E500 399 Quartz primary flake 390 O'quartz primary flake 40 Quartz primary flake 50 Quartz primary flake 51 Surface N540/E500 52 Quartz primary flake 53 Surface N540/E500 54 Quartz primary flake 55 Surface N540/E500 56 Quartz primary flake 57 Surface N540/E500 58 Surface N540/E500 59 Surface N540/E500 50 Surface	1259 Unit 3A NW	Rhyolite biface tip	_	Frag	
259 Unit 3A NW 3 260 Unit 4B SE 6 270 Unit 4B SE 6 280 O'quartzite tertiary flake 3 STP N530/E490 Strat C 3 STP N530/E490 Strat C 4 Allendale chert tertiary flake microdeb 3 STP N550/E490 Strat C 4 Allendale chert tertiary flake microdeb 5 STP N560/E490 Strat C 6 STP N560/E490 Strat C 6 STP N560/E490 Strat C 6 Ouartz tertiary flake 6 STP N560/E490 Strat C 7 Quartz primary flake 7 Surface N560/E500 7 Quartz primary flake 8 Surface N560/E500 9 Quartz primary flake 8 Surface N540/E500 9 Quartz primary flake 8 Surface N540/E500 9 Quartz primary flake 8 Surface N540/E500 9 Quartz primary flake 9 Surface N540/E500 9 Quartz primary flake 1 Duartz primary flake	1259 Unit	Rhyolite tertiary flake	_	Complete	
260 Unit 4B SE 6 3 STP N530/E490 Strat C 3 STP N530/E490 Strat C 3 STP N530/E490 Strat C 4 Allendale chert tertiary flake microdeb 5 STP N550/E490 Strat C 6 STP N560/E490 Strat C 7 Quartz tertiary flake microdeb 6 STP N560/E490 Strat C 7 Quartz tertiary flake frag 8 Surface N560/E500 9 Quartz primary flake 7 Surface N560/E500 9 Quartz primary flake 8 Surface N540/E500 9 Quartz primary flake 8 Surface N540/E500 9 Quartz primary flake 9 Surface N540/E500 9 Quartz primary flake 9 Surface N540/E500 9 Quartz primary flake 9 Surface N540/E500 9 Quartz primary flake 1 Contact primary flake	1259 Unit 3A NW	O'quartzite flake frag	_		
260 Unit 4B SE 6 3 STP N530/E490 Strat C Quartzite grinding/nut stone 3 STP N530/E490 Strat C Allendale chert tertiary flake microdeb 5 STP N530/E490 Strat C Quartz tertiary flake microdeb 5 STP N550/E490 Strat C Quartz tertiary flake microdeb 6 STP N560/E490 Strat C Quartz tertiary flake 6 STP N560/E490 Strat C Quartz primary flake 7 Surface N560/E500 Quartz primary flake 7 Surface N560/E501 Quartz primary flake 8 Surface N540/E500 Quartz primary flake 9 Surface N540/E500 Quartz primary flake 1 Quartz primary flake 1 Quartz primary flake 2 Quartz primary flake 8 Surface N540/E500 Quartz primary flake 9 Surface N540/E500 Quartz primary flake 1 Quartz primary flake	260 Unit	O'quartzite tertiary flake	3	Complete	
3 STP N530/E490 Strat C 3 STP N530/E490 Strat C 3 STP N530/E490 Strat C 4 Allendale chert tertiary flake microdeb 5 STP N550/E490 Strat C 6 STP N560/E490 Strat C 7 Quartz tertiary flake 6 STP N560/E490 Strat C 7 Quartz primary flake 7 Surface N560/E501 8 Surface N560/E502 9 Quartz primary flake 7 Surface N560/E500 9 Quartz primary flake 8 Surface N540/E500 9 Quartz primary flake 8 Surface N540/E500 9 Quartz secondary flake 8 Surface N540/E500 9 Quartz secondary flake 9 Surface N540/E500 9 Quartz secondary flake	260 Unit	O'quartzite shatter	-	Complete	
3 STP N530/E490 Strat C Allendale chert tertiary flake microdeb 3 STP N530/E490 Strat C 5 STP N550/E490 Strat C 6 STP N560/E490 Strat C 7 Quartz tertiary flake 6 STP N560/E490 Strat C 7 Quartz flake frag 7 Surface N560/E501 8 Surface N560/E502 9 Quartz primary flake 7 Surface N560/E502 9 Quartz primary flake 8 Surface N540/E500 9 Quartz primary flake 8 Surface N540/E500 9 Quartz secondary flake 8 Surface N540/E500 9 Quartz secondary flake 8 Surface N540/E500 9 Quartz secondary flake 9 Surface N540/E500 9 Quartz secondary flake 9 Surface N540/E500 9 Quartz primary flake 9 Surface N540/E500	3 STP N530/E490	Quartzite grinding/nut stone	_	Frag	
3 STP N530/E490 Strat C 5 STP N550/E490 Strat C 6 STP N560/E490 Strat C 7 Quartz tertiary flake 6 STP N560/E490 Strat C 7 Quartz flake frag 7 Surface N560/E500 7 Quartz primary flake 7 Surface N560/E501 8 Surface N560/E502 9 Quartz primary flake 8 Surface N540/E500 9 Quartz primary flake 8 Surface N540/E500 9 Quartz secondary flake 8 Surface N540/E500 9 Quartz secondary flake 8 Surface N540/E500 9 Quartz secondary flake 9 Surface N540/E500 9 Quartz secondary flake 9 Surface N540/E500 9 Quartz primary flake	3 STP N530/E490	Allendale chert tertiary flake microdeb	_	Complete	
5 STP N550/E490 Strat C 6 STP N560/E490 Strat C 7 Quartz flake frag 7 Surface N560/E500 7 Surface N560/E501 8 Surface N560/E502 8 Surface N540/E500 9 Quartz primary flake 8 Surface N540/E500 9 Quartz secondary flake 9 Surface N540/E500 9 Quartz primary flake 9 Surface N540/E500 9 Quartz primary flake 9 Surface N540/E500 9 Quartz primary flake	3 STP N530/E490		3	Frag	
6 STP N560/E490 Strat C Quartz secondary flake 6 STP N560/E490 Strat C Quartz tertiary flake 6 STP N560/E490 Strat C Quartz tertiary flake 7 Surface N560/E501 Quartz primary flake 7 Surface N560/E501 Quartz secondary flake 8 Surface N540/E500 Quartz primary flake 8 Surface N540/E500 Quartz primary flake 8 Surface N540/E500 Quartz secondary flake 8 Surface N540/E500 Quartz secondary flake 8 Surface N540/E500 Quartz secondary flake	5 STP N550/E490	Quartz tertiary flake microdeb	2	Complete	
6 STP N560/E490 Strat C Quartz tertiary flake 5 STP N560/E490 Strat C Quartz flake frag 7 Surface N560/E500 Quartz primary flake 7 Surface N560/E501 Quartz secondary flake 8 Surface N540/E500 Quartz primary flake 8 Surface N540/E500 Quartz primary flake 8 Surface N540/E500 Quartz secondary flake 8 Surface N540/E500 Quartz secondary flake 9 Surface N540/E500 Quartz secondary flake	6 STP N560/E490	Quartz secondary flake	2	Complete	
6 STP N560/E490 Strat C Quartz flake frag 7 Surface N560/E500 Quartz primary flake 7 Surface N560/E501 Quartz secondary flake 7 Surface N560/E502 White fossilif chert tertiary flake 8 Surface N540/E500 Quartz primary flake 8 Surface N540/E500 Quartz primary flake 8 Surface N540/E500 Quartz secondary flake 9 Surface N540/E500 Quartz secondary flake 9 Surface N540/E500 Quartz secondary flake	6 STP N560/E490	Quartz tertiary flake	4	Complete	
7 Surface N560/E500 Quartz primary flake 1 7 Surface N560/E501 Quartz secondary flake 1 8 Surface N540/E500 Quartz primary flake 2 8 Surface N540/E500 Quartz primary flake 2 8 Surface N540/E500 Quartz secondary flake 2	6 STP N560/E490 Strat	Quartz flake frag	_		
7 Surface N560/E501 Quartz secondary flake 1 7 Surface N560/E502 White fossilif chert tertiary flake 1 8 Surface N540/E500 Quartz primary flake 2 8 Surface N540/E500 Quartz secondary flake 2 8 Surface N540/E500 Quartz secondary flake 2	7	Quartz primary flake	_	Complete	Cortical
Nourface N560/E502 White fossilif chert tertiary flake 1 Surface N540/E500 Quartz biface 8 Surface N540/E500 Quartz primary flake 2 Surface N540/E500 Quartz secondary flake 2	7	Quartz secondary flake	_	Complete	
8 Surface N540/E500 Quartz biface 8 Surface N540/E500 Quartz primary flake 8 Surface N540/E500 Quartz secondary flake 7 Quartz secondary flake	7	White fossilif chert tertiary flake	_	Complete	
8 Surface N540/E500 Quartz primary flake 2 8 Surface N540/E500 Quartz secondary flake 2	00	Quartz biface	_	Midsection	
8 Surface N540/E500 Quartz secondary flake 2	00	Quartz primary flake	2	Complete	
2. C C M. C. A. C A. C	∞	Quartz secondary flake	2	Complete	
22.8 Surface N540/E500 Quartz interior flake	38SU2228 Surface N540/E500	Quartz interior flake	_	Frag	

Site Bag	Provenience	Description	Qty	Condition	Comments
38SU2228	Surface N540/E500	Quartz tertiary flake	-	Frag	
38SU2228	Surface N540/E500	Quartz tertiary flake microdeb	-	Complete	
38SU2229	STP N540/E500	O'quartzite utilized flake	-	Complete	
38SU222 14	STP N590/E490	Quartz primary flake	_	Frag	
38SU222 14	STP N590/E490	Quartz tertiary flake	1	Complete	
38SU222 16	STP N470/E520 Strat C 27 cmbs	Quartz tertiary flake thinning	_	Complete	
38SU22217	Surface N480/E520	Quartz primary flake	-	Complete	
38SU222 18	Surface N490/E520	Quartzite FCR	_		
38SU222 19	Surface N500/E520	Chert point	_	Frag	
38SU222 19	Surface N500/E520	Quartz primary flake	2	Complete	
38SU222 19	Surface N500/E520	Quartz secondary flake	3	Complete	
38SU222 19	Surface N500/E520	Quartz secondary flake	_	Frag	
38SU222 19	Surface N500/E520	Quartz tertiary flake	2	Complete	
38SU222 19	Surface N500/E520	Quartz cortial Shatter	_	Complete	
38SU222 20	STP N500/E520 Strat C	White fossilif chert flake frag	_		
38SU222 21	Surface N510/E520	Quartz primary flake	3	Complete	
38SU222 21	Surface N510/E520	Quartz secondary flake	_	Complete	
38SU222 21	Surface N510/E520	Quartz tertiary flake	3	Complete	
38SU222 21	Surface N510/E520	Rhyolite tertiary flake	_	Complete	
38SU222 21	Surface N510/E520	Quartzite FCR	-		
38SU222 23	Surface N520/E520	Quartz secondary flake	_	Complete	
38SU222 26	Surface N530/E520	Quartz chunk/shatter	1		
38SU222 27	Surface N530/E510	Quartz core	1	Complete	
38SU222 27	Surface N530/E510	Quartz primary flake	2	Complete	
38SU222 27	Surface N530/E510	Quartz interior flake	_	Complete	
38SU222 27	Surface N530/E510	Quartz tertiary flake	2	Complete	1 thinning/MD
38SU222 29	Surface N/A	Allendale chert point (Taylor)	1	Complete	
38SU222 30	Surface N470/E510	Quartz primary flake	_	Complete	
38SU222 31	Surface N480/E510	Quartz secondary flake	1	Complete	Cortical
38SU22233	Surface N490/E510	Quartz tertiary flake	_	Complete	5 m dogleash
38SU22233	Surface N490/E510	Quartz Shatter	1	Complete	5 m dogleash
38SU22233	Surface N490/E510	O'quartzite interior flake	1	Complete	5 m dogleash
38SU22233	Surface N490/E510	O'quartzite tertiary flake	-	Complete	5 m dogleash
38SU22235	Surface N500/E510	Quartz primary flake	_	Complete	5 m dogleash

Site Bag	Provenience	Description	Qty	Condition	Comments
38SU22235	Surface N500/E510	Quartz tertiary flake	4	Complete	5 m dogleash
38SU22235	Surface N500/E510	Quartz cortial shatter	_		5 m dogleash
38SU22235	Surface N500/E510	Quartz Shatter	-		5 m dogleash
38SU22236	Surface N510/E510	Quartz primary flake	2	Complete	5 m dogleash
	Surface N510/E510	Quartz secondary flake	2	Complete	5 m dogleash
38SU22236	Surface N510/E510	Quartz tertiary flake	2	Complete	5 m dogleash
38SU22236	Surface N510/E510	Quartz flake frag	_	Complete	5 m dogleash
	STP N510/E510 Road	Quartz cortial shatter	-		
38SU22238	Surface N520/E510	Quartz biface	_	Complete	Early stage 5M dogleash
	Surface N520/E510	Quartz secondary flake	_	Complete	5 M dogleash
	Surface N520/E510	Quartz tertiary flake	4	Complete	5 M dogleash
	Surface N520/E510	Quartz tertiary flake microdeb	_	Frag	5 M dogleash
38SU22239	Surface N540/E510	Quartz tertiary flake	3	Complete	
38SU222 39	Surface N540/E510	Quartz flake frag	_		
38SU22239	Surface N540/E510	Rhyolite tertiary flake	_	Complete	
38SU222 40	Surface N550/E510	Quartz secondary flake	2	Complete	5 M dogleash
38SU222 40	Surface N550/E510	Quartz cortial shatter	_		5 M dogleash
38SU222 42	Surface N470/E530	Quartz secondary flake	_	Complete	5 m dogleash
38SU222 43	Surface N500/E530	Quartz tertiary flake microdeb	_	Complete	5 m dogleash
38SU222 44	Surface N520/E530	Quartz primary flake	-	Complete	Chunky. 5 m dogleash
38SU222 44	Surface N520/E530	Quartz tertiary flake microdeb	-	Complete	e
38SU222 44	Surface N520/E530	Chert tertiary flake thinning/microdeb	3	Complete	5 m dogleash
38SU222 46	Surface N530/E460	Quartz secondary flake	_	Complete	
38SU222 50	STP N560/E460 Strat C 35 cmbs	Rhyolite tertiary flake thinning	_	Complete	
38SU22253	STP N550/E480 10-20 cmbs	Quartz secondary flake	_	Complete	
38SU22253	STP N550/E480 10-20 cmbs	Quartz tertiary flake	_	Complete	
	Surface N550/E500	Quartz primary flake	-	Complete	
38SU222 54	Surface N550/E500	Quartz tertiary flake	2	Complete	
38SU222 54	Surface N550/E500	Quartz tertiary flake	_	Frag	
	Surface N550/E500	Quartz cortial shatter	_		
	Surface N490/E500	Quartz biface	-	Frag (tip)	
	Surface N490/E500	Quartz secondary flake	_	Complete	
38SU222 57	Surface N500/E500	O'quartzite interior flake	-	Complete	
	Surface N510/E500	Quartz perforata	_	Complete	
38SU222 58	Surface N510/E500	Quartz secondary flake	3	Complete	

Condition Comments	Complete	Complete				Complete	Split	Complete	Complete	Complete	Complete	Complete		Complete	Complete Cortical	Complete	Complete	Complete	Complete		Complete	Frag		Complete	Complete	Complete	Complete	Complete	Complete	Complete	Frag 5 m dogleash	Complete 5 m dogleash	Frag	Complete	Complete
Qty	-	4	2	<u></u>	_	-	_	_	—	_	-	-	-	_	_	_	_	_	-	-	2	_	_	2	_	-	2	_	_	_	_	_	_	_	2
Description	Quartz secondary flake	Quartz tertiary flake	Quartz flake frag	Quartz cortial shatter	Quartz Shatter	Quartz primary flake	Quartz tertiary flake	s Rhyolite tertiary flake	Quartz primary flake	Quartz tertiary flake	Quartz primary flake	Quartz primary flake	Quartz flake frag intermediate	Chert core	Quartz secondary flake	s Brown fossilif chert tertiary flake	Quartz tertiary flake microdeb	Quartz tertiary flake	Quartz secondary flake	Corroded limestone chunk/shatter	Quartz secondary flake	Quartz secondary flake	Quartz flake frag	Strat A, C 13-30 cml Quartz tertiary flake	Quartz interior flake	White fossilif chert tertiary flake		s Blue-gray fossilif chert tertiary flake	s Blue-gray fossilif chert tertiary flake	s Quartz secondary flake	Sandstone abrading Stone? NCM	Chert tertiary flake microdeb	Quartz tertiary flake	Quartz primary flake cobble	Quartz tertiary flake
Provenience	Surface N520/E500	Surface N520/E500	Surface N520/E500	Surface N520/E500	Surface N520/E500	STP N550/E470 Strat A 15 cmbs	Surface N560/E510	STP N590/E480 Strat C 25-35 cmbs	STP N560/E470 20-30 cmbs	STP N560/E470 20-30 cmbs	STP N570/E470 20-40 cmbs	STP N570/E470 20-40 cmbs	STP N570/E470 20-40 cmbs	Surface N530/E460	Surface N670/E420	STP N610/E450 Strat C 10-15 cmbs	STP N620/E450 Strat C 30 cmbs	Surface N610/E440	STP N630/E450 30-40 cmbs	STP N600/E460	STP N610/E460 30-40 cmbs	STP N620/E460	STP N670/E400 15 cmbs	STP N600/E480 Strat A, C 13-30 cn	STP N650/E440 Strat A	STP N620/E470 Strat A 15 cmbs	STP N620/E470 Strat C 20-45 cmbs	STP N620/E470 Strat C 20-45 cmbs	STP N620/E470 Strat C 20-45 cmbs	STP N610/E470	Surface N570/E500	Surface N570/E500	Unit 1A NW 3	Unit 1B NW 3	Unit 1B SE 3
Site Bag	38SU222 59	38SU222 59	38SU222 59	38SU222 59	38SU222 59	38SU222 60	38SU222 61	38SU222 63	38SU22270	38SU22270	38SU22271	38SU22271	38SU22271	38SU22273	38SU22274	38SU222 83	38SU22284	38SU22285	38SU22288	38SU222 90	38SU22291	38SU222 92	38SU222 94	38SU22295	38SU22298	38SU22299	38SU22299	38SU222 99	38SU222 99	38SU222 100	38SU222 101	38SU222 101	38SU222105	38SU222 108	38SU222110

Condition Comments	Complete		Complete					Split		Complete			Complete	Complete				Complete	Split		Complete	Complete			Complete	Complete	Complete	Frag	Complete	Split	Complete	Complete	Complete At least 1 microdeb	Complete	Complete
Qty	-	-	-	2	-	9	3	thinn 1	-	-	_	-	_	_	3	2	-	_	_	_	2	3	_	-	-	2	_	_	_	-	—	_	3	-	-
Description	Gray chert high quality tertiary flake	Quartz flake frag	Quartz tertiary flake	FCR	FCR	FCR	FCR	Brown fossilif isotrop chert tertiary flake thinn	Quartz Shatter	Quartz primary flake	Quartz FCR	Quartz Shatter	Blue-gray fossilif chert tertiary flake	Quartz secondary flake	Quartz flake frag	Quartz cortial shatter	Quartz Shatter	Brown fossilif chert tertiary flake	Chert tertiary flake	Brown foss isotrop chert flake frag	Quartz secondary flake	Quartz tertiary flake	Quartz Shatter	Rhyolite flake frag	Quartzite smoothing stone? NCM	Allendale chert tertiary flake	Allendale chert tertiary flake	Allendale chert tertiary flake thinning	Allendale chert tertiary flake thinning	Allendale chert tertiary flake	Allendale chert tertiary flake	River pebble NCM	Allendale chert tertiary flake	Rhyolite secondary flake	Allendale chert tertiary flake
Site Bag Provenience	38SU222110 Unit 1B SE 3	2	38SU222115 Unit 1A NW 4	38SU222116 Unit 1B SE 5	38SU222117 Unit 1A NW 6	38SU222118 Unit 1A NE 6	38SU222120 Unit 1B NW 6	38SU222124 Unit 2B NE 2	38SU222126 Unit 2C NE 2	38SU222129 Unit 2A SW 3	38SU222130 Unit 2A SE 3	38SU222132 Unit 2B NE 3	38SU222132 Unit 2B NE 3	38SU222133 Unit 2B SE 3	2133 Unit 2B SE	38SU222133 Unit 2B SE 3	2133 Unit 2B SE	38SU222133 Unit 2B SE 3	2133 Unit 2B SE	2133 Unit 2B SE	2134 Unit 2C NE	38SU222134 Unit 2C NE 3	38SU222134 Unit 2C NE 3	38SU222134 Unit 2C NE 3	22 135 Unit 2C NE	38SU222138 Unit 2A NW 6	8SU22	2140 Unit 2A SE	SU222141 Unit 2B NE	22 141 Unit 2B NE	38SU222142 Unit 2B NW 6	38SU222142 Unit 2B NW 6	2143 Unit 2B SE (38SU222144 Unit 2C NE 6	38SU222144 Unit 2C NE 6

22 144 Unit 22 145 Unit	Allendale chert tertiary flake thinning	-	Complete	
22 145 Unit 2C SE			4	
11 77 100	Allendale chert tertiary flake microdeb	-	Complete	
385UZZZ 146 UNIT ZB NE /	Allendale chert tertiary flake	3	Complete	
38SU222148 Unit 4 NW 211-21 cmbs	Quartz cortial shatter/core frag	2		
38SU222148 Unit 4 NW 2 11-21 cmbs	Quartz secondary flake	2	Complete	
22148 Unit 4 NW 211	Quartz tertiary flake	4	Complete	
22 148 Unit	Quartz tertiary flake thinning/microdeb	9	Complete	
38SU222148 Unit 4 NW 2 11-21 cmbs	Quartz shatter	_		
22 149 Unit 4 SW	Quartz core	_	Complete	
149 Unit 4 SW	Quartz primary flake	1	Complete	
38SU222149 Unit 4 SW 2	Quartz tertiary flake	3	Complete	
38SU222149 Unit 4 SW 2	Quartz tertiary flake thinning/microdeb	4	Complete	
150 Unit 4 SE 2	Quartz tertiary flake	1	Complete	
38SU222151 Unit 4 NW 3	Rhyolite flake utilized	_	Complete	
151 Unit 4 NW	Quartz primary flake	_	Complete	
151 Unit 4 NW	Quartz secondary flake	_	Complete	
38SU222151 Unit 4 NW 3	Quartz tertiary flake	8	Complete 1 MD	Q
151 Unit 4 NW	Quartz flake frag	_		
38SU222152 Unit 4 SW 3	Quartz tertiary flake thinning	3	Complete	
2	Quartz tertiary flake thinning	2	Complete	
38SU222154 Unit 4 NE 4	Quartz point (Miss. triangular)	_	Frag	
38SU222154 Unit 4 NE 4	Quartzite secondary flake	_	Complete	
38SU222156 Unit 5 NE 1	Quartz tertiary flake	_	Complete	
8SU222158 Unit 5 NW	Quartz tertiary flake	2	Complete	
8SU222158 Unit 5 NW	Allendale chert. interior flake	_	Complete Whe	Wheathered
38SU222159 Unit 5 SW 2	Quartz tertiary flake	2	Complete	
8SU222160 Unit 5 SE	Quartz Shatter	-		
38SU222162 Unit 5 NE 3	Quartz tertiary flake	_	Complete	
38SU222162 Unit 5 NE 3	Quartz tertiary flake	_	Frag	
38SU222 162 Unit 5 NE 3	Rhyolite tertiary flake	2	Complete	
8SU222164 Unit 5 SE	Quartz tertiary flake	-	Complete	
38SU222164 Unit 5 SE 3	Rhyolite tertiary flake	_	Complete	
38SU222165 Unit 5 NW 4	Rhyolite tertiary flake	2	Complete	
38SU222166 Unit 5 NE 4	Rhyolite interior flake	3	Complete	
38SU222166 Unit 5 NE 4	Rhvolite tertiary flake	16	Complete	

Condition Comments	Frag	Complete	Complete		Complete 1 MD	Frag		Complete	Complete		Complete	Complete	Cortical	Complete		Complete	Complete	Complete	Complete	Complete	Complete	Frag	Complete		Complete Cortical	Complete	Complete	Complete	Complete		Complete	Complete	Cortical	Complete	Complete
Qty	2	2	2	_	2	_	2	_	_	_	8	_	_	4	_	8	-	_	-	_	3	_	2	_	-	2	_	2	3	_	_	_	_	_	2
Description	Rhyolite tertiary flake	Quartz primary flake	Rhyolite tertiary flake	Rhyolite flake frag	Rhyolite tertiary flake	Rhyolite tertiary flake	Quartz cortial shatter	Quartz primary flake	Quartz tertiary flake	Quartz shatter	Brown fossilif chert tertiary flake	Quartz primary flake	Quartz secondary flake	Quartz tertiary flake	Quartz flake frag	Brown fossilif chert tertiary flake	Brown fossilif chert primary flake	Blue-gray fossilif chert interior flake	Brown fossilif chert tertiary flake	Quartz primary flake	Quartz tertiary flake	Blue-gray fossilif chert interior flake	Blue-gray fossilif chert tertiary flake	Quartz primary flake frag	Quartz secondary flake	Blue-gray fossilif chert interior flake	Blue-gray fossilif chert tertiary flake	Quartz tertiary flake	Brown fossilif chert tertiary flake	Brown fossilif chert flake frag intermediate	Quartz primary flake	Quartz tertiary flake	Blue-gray fossilif chert cortial flake	Blue-gray fossilif chert tertiary flake	Quartz tertiary flake
Site Bag Provenience	221	38SU222167 Unit 5 SW 4	38SU222168 Unit 5 NW 5	38SU222168 Unit 5 NW 5	38SU222169 Unit 5 NE 5	38SU222169 Unit 5 NE 5	38SU222171 Unit 5 SE 5	38SU222172 Unit 6 NW 2	38SU222173 Unit 6 SW 2	2173 Unit 6 SW	38SU222173 Unit 6 SW 2	173 Unit 6 SW	173 Unit 6 SW	174 Unit 6 NE	38SU222174 Unit 6 NE 2	175 Unit 6 SE	38SU222176 Unit 6 NW 3	176 Unit 6 NW	176 Unit 6 NW	176 Unit 6 NW	177 Unit 6	177 Unit 6 NE	177 Unit 6 NE	177 Unit 6 NE	178 Unit 6	2178 Unit	38SU222178 Unit 6 SW 3	2179 Unit	38SU222179 Unit 6 NW 4	38SU222179 Unit 6 NW 4	SU222 179 Unit	38SU222180 Unit 6 NE 4			

Condition Comments	Complete Cortical		Complete		Complete	Complete	Complete	Complete	Complete 1 MD	Feature 1	Complete	Complete	Mend	Complete	Cortical		Complete Yadkin	Complete Yadkin	Sykes/White Springs?	Frag
Qty	-	-	2	-	_	_	—	-	2	_	_	_	2	2	2	_	_	-	_	2
Description	Quartz secondary flake	Quartz shatter	Brown fossilif chert tertiary flake	Blue-gray fossilif chert shatter	Blue-gray fossilif chert interior flake	Blue-gray fossilif chert tertiary flake	Brown fossilif chert tertiary flake	Allendale tertiary flake	Quartz tertiary flake	Quartz cortial shatter	Quartz secondary flake cobble	Rhyolite tertiary flake thinning/microdeb	Quartz core frag/cortial shatter	Rhyolite tertiary flake	Quartz cortial chunk	Quartz Shatter	Rhyolite PP/K	Rhyolite PP/K	Rhyolite PP/K	Quartz secondary flake
Site Bag Provenience	38SU222180 Unit 6 NE 4	38SU222180 Unit 6 NE 4	38SU222180 Unit 6 NE 4	38SU222181 Unit 6 SW 4	38SU222182 Unit 6 SE 4	38SU222182 Unit 6 SE 4	38SU222182 Unit 6 SE 4	38SU222182 Unit 6 SE 4	38SU222183 Unit 6 NE 5	38SU222184 Unit 2A SW 3	38SU222 189 Unit 3C	38SU222 190 Unit 3D	38SU222 69A STP N540/E470 A 25-40 cmbs	38SU222 69A STP N540/E470 A 25-40 cmbs	38SU222 69B Surface N540/E470	38SU222 69B Surface N540/E470	38SU2991 STP 1	38SU2503 Surface	38SU2503 Surface	38SU250 3 Surface

APPENDIX B: PREHISTORIC CERAMICS

Unentation Kim Decoration																																													
Orientation												Straight																															Slightly	Incurved	
Lip Shape												Flattened																																Tapered	
Kim Iype												Plain																													lar	pe		Plain	
Thickness Motif				lollored	מומובו	Rectilinear					Parallel	5										Parallel							Parallel												Semi-circular	Hollow Reed			
	80	6	6	0	0.0	9	00	1	7.5	7.5	σ	7.5	7.5		5.5	9 .	15.5	_	6.5		9	7	7			6.5	5.5	ת	00	10.5		6	5.2				6	6	7.5	7.5		5.5	7.5	7.5	
Size	2	4	m	_	1	2 2	2	(m	2	4	4	3		2	n	m 0		2		2	2	2	,	- 0	V	N	n	3	8	2	2	2	2			3	2	3	m		2	m	3	4
Form	Body	Body	Body	one die	pod	Body	Body		Body	Body	Body	Rim	Body	Sherdlet	Body	Body	Base	Sherdlet	Body		Body	Body	Body	Sherdlet	Body	Body	Body	Neck	Body	Body	Body	Body	Body	Body	Body	Sherdlet	Body	Body	Body	Body		Body	Body	Rim	Sherdlet
Interior	Smoothed Gritty	Smoothed Gritty	Smoothed Irregular	Canadhood Ceithe	Singothed ontry	Smoothed Gritty	Smoothed		Smoothed	Smoothed Gritty	Smoothed Gritty	Smoothed Gritty	Smoothed Gritty		Smoothed Gritty	Smoothed Gritty	Smoothed Gritty	smootned irregular	Smoothed		Smoothed	Smoothed	Smoothed		Indet	Smoothed	Smoothed Gritty	Smoothed Gritty	Smoothed Gritty	Smoothed Gritty	Indet	Smoothed Gritty	Smoothed	Smoothed Gritty	Smoothed Gritty		Smoothed Gritty	Smoothed Gritty	Smoothed Gritty	Smoothed		Smoothed Irregular	Smoothed	Smoothed	
Exterior	CHECK STAMPED	CHECK STAMPED	CHECK STAMPED	WIDE SPACED	CORD MARNED	CHECK STAMPED	CHECK STAMPED		CHECK STAMPED	CHECK STAMPED	CODD MADKED	PLAIN	PLAIN		PLAIN	PLAIN	PUNCTATED	MAIN	PI AIN		RANDOM INCISED	CORD MARKED	PLAIN		PLAIN	PLAIN	PLAIN	WIDE SPACED	CORD MARKED	PLAIN	INDETERMINATE	INDETERMINATE	INDETERMINATE	INDETERMINATE	INDETERMINATE		PLAIN	INDETERMINATE	INDETERMINATE	PLAIN	I- DRAG&JAB		PLAIN	PLAIN	
Culture Historic Type	Stamped Stamped	Deptford 2 Check Stamped	Deptford 2 Check Stamped	Deptford 2 Wide-spaced	Deptford 1 Check	Stamped Woodland 2 indet	Deptford 2 Check Stamped	Deptford 2 Check	Stamped Deptford 2 Check	Stamped	Dontford 2 Cord Marked	Woodland 2 Plain	Woodland 2 Plain		Woodland 2 Plain	Woodland 2 Plain	Pee Dee 2 Punctated	Woodland 2 Plain	Woodland 1 Plain	Refuge 1.2 Random	Incised	Deptford 1 Cord Marked	Thom's Creek 1 Plain		Woodland 2 Plain	Woodland 2 Plain	Woodland 2 Plain	Woodland 2 Plain	Cord Marked	Woodland 1 Plain	Woodland 1 indet	Woodland 1 indet	Woodland 2 indet	Woodland 2 indet	Woodland 2 indet		Woodland 2 Plain	Woodland 1 indet	Woodland 1 indet	Woodland 2 Plain	Thom's Creek 1 Drag-and-		Woodland 1 Plain	Woodland 2 Plain	
Series	DEPTFORD 2	DEPTFORD 2	DEPTFORD 2	COOCTE	DEPTFORD 2	DEPTFORD 1	DEPTEORD 2		DEPTFORD 2	DEPTFORD 2	C DEDTECTOR 2	WOODLAND 2	WOODLAND 2		WOODLAND 2	WOODLAND 2		WOODLAND 2	MOODI AND 1		REFUGE 1.2	DEPTFORD 1	THOM'S CREEK 1		WOODLAND 2	WOODLAND 2		WOODLAND 2	DEPTEORD 2	WOODLAND 1	WOODLAND 1	WOODLAND 1	WOODLAND 2	WOODLAND 2	WOODLAND 2		WOODLAND 2	WOODLAND 1		WOODLAND 2		THOM'S CREEK 1	WOODLAND 1	WOODLAND 2	
Unit Level Qty Series	-	-		4 .	- (-		-				_	_	-			- 0	7		-	-	-	-	-	-	-		-	-	-	-	-	-	-	3	1	-	-	-		1	_	_	1
East	200	200	200	200	220	520	520		520	520	520	470	470	470	490	490	200	200	460	2	200	200	200	200	510	210	510	510	510	510	510	510	520	520	520	520	200	200	200	200		480	480	480	480
oe North	460	460	460	460	460	460	005		200	200	200	500	200	200	480	480	470	470	004		480	490	490	490	460	460	460	460	460	460	460	460	470	470	470	470	450	450	450	450		460	460	460	460
Cat # Prov Type North	surf	surf	surf	surt	surt	surf	Ting ting	5	surf	surf	surt	stp	stp	stp	stp	stp	stp	stp	stp	d	stp	stp	stp	stp	surf	surf	surf	surf	Surf	surf	surf	surf	stp	stp	stp	stp	surf	surf	surf	stp		surf	surf	surf	surf
Cat #	-	_	- (7 .	_	2 8	· -		-	- 0	2 -		5	3	-	-	- 0	2 0	0 -		-	-	2	3	-	_	-	-	0	m	4	4	-	-	-	2	-	2	2	-		-	2	3	4
Bag	-	-		_ (7	2 0	1 4		4	4 .	4 1	n (4	9	9	7	7	6	000	10	2	11	12	12	12	15	15	15	15	15	15	15	15	18	18	18	18	20	20	20	21		22	22	22	22
Site	3850058	3850058	38SU058	3820028	3820028	38SU058	38511058		3820058	3850058	3850058	38511058	3850058	3850058	3820058	3820058	3820058	3850058	38511058	00000	3820058	3820058	3850058	3820058	3820058	3820058	3820058	3820058	38911058	38511058	3850058	3850058	3850058	3850058	3850058	3850058	3850058	3850058	3820058	3820058		3850058	3850058	3850058	3850058

coration																																																					
n Rim Dec																																																					
Orientation Rim Decoration										Flared		Straight)												Straight			straignt																									
Lip Shape										Tapered		Flattened													Flattened			Flattened																									
Rim Type										Plain		Plain													Plain			Plain																									
s Motif																											Rigid																										
Thickness Motif	80	10				9	8.5	7		4	6.5	7		8	7	6.5	6.5	6.5	7	7	7	2	7	2	9		11.5	٥	7		9.5		8.5	8.5		8			11.5				11,5		7		9	5.5	2		7.5	00 0	8.5
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eries	WOODLAND 2	WOODLAND 2	THOM'S CREEK	THOM'S CREEK 1	THOM'S CREEK	WOODLAND 2	WOODLAND 2	WOODLAND 2	WOODLAND 2	WOODLAND 1	WOODLAND 2	WOODLAND 1		WOODLAND fp	WOODLAND 2		WOODLAND 2		WOODLAND 2		WOODLAND 2	C UGOTEODO 2	MOODI AND 2	S CANADA	DEPTFORD 2		DEPTFORD 2	C COOL	DEP I FORD 2	DEPTFORD 2		DEPTFORD 2			DEPTFORD 2	WOODLAND 2			WOODLAND 2		WOODLAND 2			WOODLAND 2					WOODLAND 2				
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	CHECK STAMPED	CHECK STAMPED	CUECY CTAMBED	CHECK STAMPED	MAIN			CORD MARKED		CHECK STAMPED	INDETERMINATE	CORD MARKED	PLAIN	PLAIN	PLAIN	INDETERMINATE		INDETERMINATE		SIMPLE STAMPED	CLOSE AND LINES	SIMPLE STAMPED	PLAIN	PLAIN	CORD MARKED	CORD MARKED	CIMDI E CTAMPED	CORD MARKED		CHECK STAMPED	INDETERMINATE	INDETERMINATE	INDETERMINATE	PLAIN	PLAIN		CIVIDAM COOC TIME	FINE CURD MARKED Floated	PLAIN	INDETERMINATE	INDETERMINATE	DECORATED			SIMPLE STAMPED	INDETERMINATE	WIDE SPACED	CORD MARKED	INDETERMINATE	and and and	WIDE SPACED
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Exterior		CURU MARKED		CHECK STAMPED	INDETERMINATE	INDETERMINATE	FABRIC IMPRESSED	FABRIC IMPRESSED	FABRIC IMPRESSED	INDETERMINATE	DECORATED	CHECK STAMPED	T Green TO TTATION	INDETERMINATE	INDETERMINATE	STAMPED	PLAIN	DI AIN	PI AIN		DENTATE CTAMBED	DENIALE STAMFED	PLAIN MARKED	CORD MARKED		STAMPED	INDETERMINATE	DECORATED	INDETERMINATE		CHECK STAMPED	INDETERMINATE	INDETERMINATE	DECORATED		CORD MARKED	DECORATED	INDETERMINATE	INDETERMINATE	INDETERMINATE	INDETERMINATE	INDETERMINATE	STAMPED
Culture Historic Type	Deptford 2 Wide-spaced	Cord Marked Deptford 2 Check Stamped	Deptford 2 Check	Stamped	Woodland 2 indet	Cape Fear 1 indet Deptford 1 Fabric	Impressed	Deptrord 2 Fabric Impressed	Deptford 2 Fabric Impressed	Woodland 1 indet	decorated	Stamped Check	Refuge 1.1 Dentate	Woodland 2 indet		Santee 1 indet stamped	Woodland 2 Plain	Woodland 2 Dlain	Woodland 1 Dlain		Refuge 2.1 Dentate	oraniped .	Control Cond Maded	Deptford 1 Cord Marked		Pee Dee 2 indet stamped		Cape Fear 2 indet dec	Pee Dee 1 indet	Deptford 2 Check	Stamped	Santee Z Indet	Woodland 2 indet	decorated	Cape Fear 2 indet	Cape Fear 2 Cord Marked	Cape Fear 2 indet dec	Woodland 1 indet	woodand z indet stamped				
Series	DEPTEORD 2	DEPTFORD 2		DEPTFORD 2	WOODLAND 2	CAPE FEAR 1	DEPTFORD 1	DEPTFORD 2	DEPTFORD 2		WOODLAND 1	DEPTFORD 1	1 1 101 11	2		SANTEE 1	CARE FEAR 1	WOOD! AND 2	WOOD! AND 1		REFIIGE 2.1	THOUSE ST.	CANTEE 2	DEPTFORD 1		PEE DEE 2		CAPE FEAR 2	PEE DEE 1	0	DEPTFORD 2	SAN I EE 2		WOODLAND 2	CAPE FEAR 2	CAPE FEAR 2	CAPE FEAR 2	WOODLAND 1	WOODLAND 2				
Unit Level Oty Series	-			-	-	-	1	-	-		-	-	-		,					· m	o -						-	_	-	٠	- ,	- 2	1	1	-	-	-	-	-				-
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Cat # Prov Type North	610	610		019	610	610	620	640	640		650	640	u	558		A-8	250	660	999	660	650		485	485		485	483	435	929	404	495	495		455	455	465	465	465	465	465	465	465	465
Prov Ty	stn	stp		stp	stp	stp	stp	stp	stp		stp	stp	4	stp		stp	oth oth	stp	st o	sto	sto ots	3 1	die	surf		surf	Lins	surf	surf	4	Surf	surf		surf	surf	surf	surf	Surf	surf	surf	surf	surf	surf
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Orientation Rim Decoration																																										
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Form	Body	Body	Body	Body	Body	Body	Body	Rim	Sherdlet	Body	Sherdlet	Body	coop.	Body	Body	Body	Rody	fpoo	Body	Sherdlet	Body	Body	Body	Rody	(page	Body	Body	Body	Body	Body	Rim	Body	Rody	Body	Body		Rim	Body	Body	Body	Body	Body
Interior	Smoothed Gritty	Indet	Smoothed Gritty	Eroded	Eroded	Smoothed	Smoothed Gritty	Eroded		Eroded	i	Floated	Lioated	Smoothed	Smoothed Gritty	Smoothed Gritty	Froded		Smoothed Gritty		Smoothed Gritty	Smoothed Gritty	Smoothed Gritty	Smoothed Gritty	San Paragonia	Floated	Eroded	Froded	Eroded	Eroded	Floated	Floated	Floated	Froded	Eroded		Smoothed Gritty	Smoothed	Smoothed Gritty	Smoothed Gritty	Smoothed Gritty	Smoothed Gritty
Exterior	INDETERMINATE DECORATED	CORD MARKED	CORD MARKED	DECORATED	INDE LEKMINATE DECORATED	STAMPED	COMPLICATED	INDETERMINATE	TENNATEDAIN	DECORATED		SIMPLE STAMPED	COND MANNED	PLAIN	CORD MARKED	DECORATED	INDETERMINATE		DECORATED		CORD MARKED	CORD MARKED	CORD MARKED	EARBIC IMPRESSED	INDETERMINATE	DECORATED	INDETERMINATE	DECORATED	INDETERMINATE	SIMPLE STAMPED		SIMPLE STAMPED	CINE CODD MADKED Floated	INDETERMINATE	INDETERMINATE	COMPLICATED	STAMPED COMPLICATED	STAMPED	COMPLICATED	COMPLICATED	COMPLICATED	INDETERMINATE
Culture Historic Type	Woodland 1 indet decorated	Cape Fear 2 Cord Marked	Cape Fear 2 Cord Marked	Santee 2 indet decorated	Santee 2 indet decorated	Stamped	Pee Dee 2 Complicated Stamped	Pee Dee 1 indet		Cape Fear 2 indet dec		Santee 2 Simple Stamped	Deptiora i cora markea	Pee Dee fp Plain	Cape Fear 2 Cord Marked	Cape Fear 2 indet dec	Woodland 1 indet	neco ace	Santee 2 indet decorated		Cape Fear 2 Cord Marked	Cape Fear 2 Cord Marked	Cape Fear 2 Cord Marked	Deptford 2 Fabric	200000000000000000000000000000000000000	Santee 1 indet decorated	Cape Fear 2 indet	Cane Fear 2 indet dec	Santee 2 indet	Santee 1 Simple Stamped	Santee 2 Cord Marked	Santee 2 Simple Stamped	Cape Fear 2 Fine Cord	Woodland 2 indet	Woodland 2 indet	Pee Dee 2 Complicated	Stamped Stamplicated	Stamped	Pee Dee 1 Complicated Stamped	Pee Dee 2 Complicated Stamped	Pee Dee 2 Complicated	Woodland 1 indet
Series	WOODLAND 1	CAPE FEAR 2	CAPE FEAR 2	SANTEE 2	SANTEE 2	PEE DEE 2	PEF DEF 2	PEE DEE 1		CAPE FEAR 2		SANTEE 2	PEE DEE FINE	PASTE	CAPE FEAR 2	CAPE FEAR 2	1 GNA IGOOM		SANTEE 2		CAPE FEAR 2	CAPE FEAR 2	CAPE FEAR 2	DEDTECTOR 2	DEL 11 OND E	SANTEE 1	CAPE FEAR 2	CADE FEAR 2	SANTEF 2	SANTEE 1	SANTEE 2	SANTEE 2	CANE CEAD 2	WOOD! AND 2	WOOD! AND 2		PEE DEE 2	PEE DEE 2	PEE DEE 1	PEE DEE 2	DEE DEE 2	WOODLAND 1
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Exterior	PLAIN	INDETERMINATE	WIDE SPACED	CORD MARKED	PLAIN	PLAIN		PLAIN		CORD MARKED		PLAIN	INDETERMINATE	DECORATED	PLAIN		DENTATE STAMPED Smoothed	PLAIN	PLAIN	PLAIN	PLAIN		CHECK STAMPED	INDETERMINATE	DI AIN			PLAIN	INDETERMINATE	PLAIN	4			PLAIN	PLAIN	PLAIN	PLAIN		PLAIN	PI AIN			CHECK STAMPED		CHECK STAMPED												
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Exterior	PLAIN	INDETERMINATE	INDETERMINATE	PLAIN		PLAIN		CORD MARKED	COMPLICATED	STAMPED	INDETERMINATE	DECORATED	INDETERMINATE			SIMPLE STAMPED	CORD MARKED	d SIMPLE STAMPED		COMPLICATED		d SIMPLE STAMPED	INDETERMINATE		CHECK STAMPED		CHECK STAMPED	CHECK STAMPED		SIMPLE STAMPED	CHECK STAMPED	CHECK STAMPED	INDETERMINATE	STAMPED	INDETERMINATE			CORD MARKED	d CORD MARKED			d STAMPED	INDEFENDING	CHECK STAMPED	CHECK STAMPED		d DECORATED
Culture Historic Type	Woodland 2 Plain	Woodland 2 indet	Woodland 2 indet	Cape Fear 1 Plain		Woodland 2 Plain		Deptford 1 Cord Marked	Pee Dee fp Complicated	Stamped	Moodle C backet	decorated	Woodland 2 indet		Cape Fear 2 Simple	Stamped	Cape Fear 2 Cord Marked	Santee 1 Simple Stamped		Pee Dee 2 Complicated Stamped		Santee 1 Simple Stamped SIMPLE STAMPED	Woodland 2 indet		Deptford 2 Check Stamped	Deptford 2 Check	Stamped 2 Chack	Deptrord Z Check Stamped	Cape Fear 2 Simple	Stamped	Stamped	Deptford 2 Check	Woodland 2 indet	stamped	hommeto tobai C brotton	Woodland 2 Plain		Cape Fear 2 Cord Marked	Cape Fear 2 Cord Marked	Woodland 1 indet		Pee Dee 2 indet stamped	Cape Fear 2 Indet Deptford 2 Check	Stamped	Deptford 2 Check Stamped	-	Santee 2 indet decorated Woodland 1 Plain
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Interior	Smoothed Gritty	Floated	Eroded	Smoothed Irregular		Smoothed Gritty	Eroded	=	Spalled	Smoothed Gritty	Floated		Floated	Froded	Smoothed Gritty		Floated	Eroded	Eroded		Eroded		Smoothed Gritty	Carlo Polico		Floated		Smoothed Gritty	Floated	Eroded	Eroded	Eroded	Froded		Smoothed Gritty		Froded	Floated		Floated		smoothed unity	Smoothed Gritty	Indet	Smoothed	Smoothed	Smoothed Gritty
Exterior	INDETERMINATE		STAMPED		COMPLICATED	INDETERMINATE	INDETERMINATE	INDETERMINATE	STAMPED	CHECK STAMPED	INDETERMINATE STAMPED	INDETERMINATE	STAMPED	DECORATED	INDETERMINATE		FABRIC IMPRESSED	INDETERMINATE	CHECK STAMPED		CHECK STAMPED	THE ALABAMATE OF THE PARTY OF T	STAMPED			CORD MARKED		STAMPED	INDETERMINATE	INDETERMINATE	INDETERMINATE	INDETERMINATE	INDETERMINATE	INDETERMINATE	STAMPED	INDETERMINATE	DECORATED	DECORATED	INDETERMINATE	DECORATED	INDETERMINATE	INDETERMINATE	DECORATED	INDETERMINATE	INDETERMINATE	INDETERMINATE	INDETERMINATE
Culture Historic Type	Woodland 2 indet stamped	Santee 2 Simple Stamped	Woodland Z indet stamped	Santee 2 Simple Stamped	Pee Dee fp Complicated	Santee 2 indet	Woodland 1 indet	Woodland 2 indet	Stamped Deptford 2 Check	Stamped	Woodland 2 indet stamped	Woodland 2 indet	stamped	decorated	Woodland 2 indet	Deptford 2 Fabric	Impressed	Woodland 2 indet	Deptford Z Check Stamped	Deptford 2 Check	Stamped	Manufacture 1 : Land	Woodland I indet			Cape Fear 2 Cord Marked	Pee Dee fp Complicated	Stamped	Santee 2 indet	Woodland 2 indet	stamped	Woodland 2 indet	decorated 2 indo.	Woodland 2 Indet decorated	Woodland 2 indet	decorated	Woodland 2 indet	Woodland 2 indet	decorated	Woodland 2 indet	Woodland 2 indet	Woodland 2 indet	Woodland 2 indet				
Series	WOODLAND 2	SANTEE 2	WOODLAND 2	SANTEE 2	PEE DEE FINE	SANTEE 2	WOODLAND 1	C CIAN IGOOM	WOODLAND 2	DEPTFORD 2	WOODLAND 2		WOODLAND 2	WOOD! AND 2	WOODLAND 2		DEPTFORD 2	WOODLAND 2	DEPTFORD 2		DEPTFORD 2		WOODLAND 1			CAPE FEAR 2	PEE DEE FINE	PASTE	SANTEE 2	WOODLAND 2	WOODLAND 2	WOODLAND 2	WOODLAND 2		WOODLAND 2	C Clas ICOCO	WOUDLAND 2	WOODLAND 2		WOODLAND 2	C CINY INDOM	WOODLAND 2	WOODLAND 2	WOODLAND 2	WOODLAND 2	WOODLAND 2	WOODLAND 2
Unit Level Qty Series	1	-	-	-	-		_		-	-	-		-	-	-			-	-			-	-	2	-	-		_	-	_	-	-	-		_		-	-		-		-	_	-	1	_	-
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oe North	520	520	520	520	530	530	530	530	000	530	530		530	530	530		530	230	470		470	1	480	480	480	490		490	490	490	490	490	490		490	003	200	200		200	200	2	200	200	200	200	200
Cat # Prov Type North	surf	stp	stp	stp	Surf	surf	surf	4110	line	surf	surf		surf	surf	surf		stp	stb	surf		surf	Inc	surf	surf	stp	surf		surf	surf	surf	surt	surt	stp		stp	94110	line	surf		surf	CILL	3	surf	surf	surf	surf	surf
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Site	385U222	385U222	38SU222	385U222	38511222	38SU222	38SU222	3891222	2220555	385U222	38SU222		3850222	385U222	38SU222	0000	3850222	2020666	385U222		38SU222	3030555	385U222	385U222	385U222	385U222		3850222	3850222	3850222	3850222	3820222	385U222		385U222	38011222	3030555	385U222		385U222	3891222		38SU222	38SU222	385U222	38SU222	38SU222

Orientation Rim Decoration													Simple	Stamped																									Stamped		
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Rim Type														Plain																									Plain		
s Motif											Non-rigid		Cross	Stamped	Stamped	Stamped				Digit-gold	Parallel	Cross													Cross	Stamped		Non-rigid		Parallel	
Thickness Motif	11	7		6.5	5.5	2	4	80		7.5		٢	_	5.5	2	6.5	∞ ∞		5.5	0	9	6.5	9	7.5		o &	c	ν α	. w		0	?	c	ם ה	2.5	00 1	_	6.5	7.5	7.5	9.5
Size	m	4		2	2	2	2	2		2	3	c	7	4	3	4	2 %		2	C	2	4	0	1 %		m m	c	70	2 2		c	0	c	20 1	2	8	m	3	c	200	2
Form	Body	Body	Sherdlet	Body	Body	Body	Body	Body	Sherdlet	Body	Body	, +	body	Rim	Body	Body	Body		Body Sherdlet	Dod	Body	Body	Rody	Body		Body		Body	Body	Sherdlet	4.0	Sherdlet	-	Body	Body	Body	Body	Body	Rim	Body	Body
Interior	Smoothed Gritty	Smoothed Gritty		Eroded	Smoothed	Smoothed	Smoothed	Floated		Smoothed Gritty	Eroded		Smootned	Smoothed Irregular	Floated	Floated	Floated Smoothed Irregular		Smoothed	Compathod Contt	Smoothed Gritty	Eroded	Floated	Eroded		Eroded	ī	Floated	Froded		7	0000		Eroded	Eroded	Smoothed Irregular	Smoothed Gritty	Floated	Floated	Smoothed Gritty	Floated
Exterior	PLAIN	PLAIN		INDETERMINATE DECORATED	CHECK STAMPED	INDETERMINATE	INDETERMINATE	INDETERMINATE		CHECK STAMPED	FABRIC IMPRESSED		FABRIC IMPRESSED	SIMPLE STAMPED	SIMPLE STAMPED		SIMPLE STAMPED SIMPLE STAMPED		DECORATED	CTOOL CIGORY	CORD MARKED	SIMPLE STAMPED	STAMPED	INDETERMINATE	INDETERMINATE	DECORATED	INDETERMINATE	STAMPED	INDETERMINATE			STAMPED	-	CHECK STAMPED	PLAIN		PLAIN	FABRIC IMPRESSED	COMPLICATED		PLAIN
Culture Historic Type	Woodland 2 Plain	Woodland 2 Plain		Cape Fear 1 indet decorated	Deptford 2 Check	Santee 2 indet	Santee 2 indet	Woodland 2 indet	Joseph Charles	Stamped Stamped	Cape Fear 2 Fabric Impressed	Cape Fear 2 Fabric	Impressed	Santee 1 Simple Stamped SIMPLE STAMPED	Santee 1 Simple Stamped SIMPLE STAMPED	Santee 1 Simple Stamped	Santee 1 Simple Stamped	Woodland 1 indet	decorated	Deptford 1 Fabric	Deptford 2 Cord Marked	Santee 2 Simple Stamped	Woodiand 2 Indet	Woodland 1 indet	Woodland 1 indet	decorated Woodland 2 indet	Woodland 2 indet	stamped 1 indet	Woodland 1 indet			ree Dee 2 maet stambed	Deptford 2 Check	Stamped	Santee 2 Plain	Santee 2 Simple Stamped	Woodland 1 Plain	Impressed	Pee Dee fp Complicated	Santee 1 Simple Stamped	Woodland 1 Plain
Series	WOODLAND 2	WOODLAND 2		CAPE FEAR 1	DEPTEORN 2	SANTEE 2	SANTEE 2	WOODLAND 2		DEPTFORD 2	CAPE FEAR 2		CAPE FEAR 2	SANTEE 1	SANTEE 1	SANTEE 1	SANTEE 1	771100	WOODLAND 1		DEPTFORD 2	SANTEE 2	C GIAN IGOOM	WOODLAND 1		WOODLAND 1		WOODLAND 2	WOODLAND 1			PEE DEE 2		DEPTFORD 2	SANTEE 2	SANTEE 2	WOODLAND 1	DEPTFORD 1	PEE DEE FINE	SANTEE 1	WOODLAND 1
Unit Level Oty	-	_	4	-			-	-	4	_	-			-	-	1				•		-	-								9			-	-	-	1	-			-
East	510	510	510	510	013	510	510	510	510	510	510		210	510	510	510	510	2	510		510	510	6	530		530		530	460	460		460		460	460	480	480	200	003	200	200
De North		200	200	510		510	510	510	510	510	520		520	520	520	520	520	350	520 520	6	540	250	2	470 470	2	500		520	520	520		540		250	250	510	520	550	C	550	550
# Prov Type		surf	surf	Surf	1	Surf	surf	surf	surf	stp	Surf		surf	surf	surf	surf	surf	Ins	surf	,	surf	surf	,	surf	line	surf		surf	Surf	surf		surf		surf	stp	surf	stp	surf	30.00	surf	surf
Cat #	4	4	2	2	1 -	- ~	n m	4	2	-	-		_	2	3	3	en e	n	4 2		- 2	-	(7 - 0	7	- 2				- 2		- 2		-	-	-	_	_	C	3 6	4
Bad	35	35	35	36	20	36	36	36	36	37	38	2	38	38	38	38	38	20	38		39	40		42	75	43		44	45	45		47		48	49	51	52	54	7	54	54
Site	38SU222	385U222	38SU222	38511222	2001222	38511222	38SU222	38SU222	385U222	385U222	38911222	337000	3850222	385U222	385U222	385U222	38SU222	3030222	38SU222 38SU222		38SU222 38SU222	385U222	00000	385U222 385U222	3030222	38SU222 38SU222		38SU222	3850222	38SU222		38SU222 38SU222		385U222	38SU222	385U222	385U222	385U222	0001300	38SU222 38SU222	38SU222

Orientation Rim Decoration																																		
Orientation								Incurved						Flared											Straight	200						tdoi: 45	Sudigin	
Lip Shape							Trincator	Rounded						Truncated											Bevelled							Popula	naniinau	
Rim Type								Plain						Plain											Plain							Hol. Reed Punc/Incide	III	
Thickness Motif	3	Stamped						Parallel	Stamped			Cross						Kigid									Cross	Stamped	Stamped					
	14.5	80	7	5.5	5	3	2	7.5	9	4	9	9	7	v) U	0.3		D C	6.5	2	7.5	2	7		7		6.5	6	6.5	00	~	7		5.5
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Form	Base	Body	Body	Body	Rody	fnoo	Body	Rim	Body	Body	Body	Body	Body	Rim	- Pod	Body	Dod.	pody	Body	Body	Body	Body	Body	Sherdlet	Rim		Body	Body	Body	Body	Body Body Shordlet	ig ig		Body
Interior	Unsmoothed	Smoothed Gritty	Smoothed Gritty	Smoothed Gritty	Smoothed Gritty		Smoothed Gritty	Smoothed Gritty	Eroded	Smoothed	Eroded	Eroded	Eroded	Smoothed	Cmoothood Crittee	Spalled Spalled		rioated	Eroded	Eroded	Smoothed Gritty	Floated	Floated		Smoothed		Smoothed Irregular	Smoothed Gritty	Smoothed Gritty	Eroded	Floated	Smoothed Gritty		Smoothed Irregular
Exterior	PLAIN	ed SIMPLE STAMPED	CHECK STAMPED	CHECK STAMPED	INDETERMINATE	INDETERMINATE	DECORATED	ed SIMPLE STAMPED	d SIMPLE STAMPED	INDETERMINATE	DECORATED	FINE CORD MARKED Eroded	CHECK STAMPED	CHECK STAMPED	INDETERMINATE	INDETERMINATE	EABBIC IMBESSED	COMPLICATED	STAMPED		INDETERMINATE	INDETERMINATE	INDE LEKMINATE STAMPED		CHECK STAMPED		CHECK STAMPED	d SIMPLE STAMPED			INDETERMINATE STAMPED PLAIN	COMPLICATED		STAMPED
Culture Historic Type	Woodland 2 Plain	Santee 2 Simple Stampe	Stamped Check C	Stamped Check	Woodland 2 indet	Woodland 2 indet	decorated	Santee 1 Simple Stamped SIMPLE STAMPED	Santee 1 Simple Stamped S	Moodland 2 indot	decorated	Cape Fear 1 Fine Cord Marked	Deptford 1 Check Stamped	Deptford 2 Check Stamped	Woodland 2 indet	Woodland 2 indet decorated	Deptford 2 Fabric	Pee Dee 2 Complicated	Stamped	Pee Dee 2 indet stamped	Pee Dee 2 indet	Woodland 1 indet decorated	Woodland 2 indet stamped	1000	Deptford 2 Check Stamped	Deptford 2 Check	Stamped	Santee 2 Simple Stamped SIMPLE STAMPED	Santee 2 Simple Stamped	Santee 2 indet stamped	Santee 2 indet stamped Woodland 2 Plain	Pee Dee 1 Complicated Stamped	Pee Dee 1 Complicated	Stamped
Series	WOODLAND 2	SANTEE 2	DEPTFORD 2	DEPTFORD 2	WOODL AND 2		WOODLAND 2	SANTEE 1	SANTEE 1		WOODLAND 2	CAPE FEAR 1	DEPTFORD 1	DEPTFORD 2	VOODI AND 2	WOODLAND 2	DEPTEORO 2	DEL IL OND 2	PEE DEE 2	PEE DEE 2	PEE DEE 2	WOODLAND 1	WOODLAND 2		DEPTFORD 2		DEPTFORD 2	SANTEE 2	SANTEE 2	SANTEE 2	SANTEE 2 WOODLAND 2	PEE DEE 1		PEE DEE 1
Unit Level Qty Series		_	-	-	-		-	-		-	1	_	-	-	-	-	-		-	_	-	-	-	-	-		-	-	-	_	~	-		-
East	200	200	200	200	200		200	200	200	200	200	200	200	200	200	200	200	2	200	200	200	200	200	200	510		510	510	510	510	510	480		200
Prov Type North	000	530	490	490	490		490	200	200	200	200	510	510	510	510	510	520	22	520	520	520	520	520	520	260		260	260	260	260	560	570		470
	Sur	surf	surf	surf	surf		surf	surf	surf	LINS	surf	surf	surf	surf	Surf	surf	SIIT	5	surf	surf	surf	surf	surf	surf	surf		surt	surf	surf	surf	surf surf	stp	-	surf
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Orientation Rim Decoration			Flared																																													
Lip Shape																																																
Rim Type																																											SSO		77		_	
Size Thickness Motif									Parallel	Parallel	Cross	Cross	Cross	Stamped		Stamped					Parallel													Rigid		Rigid							Filfot Cross	Cross	Stamped	Stamped	Cross	1
Thickn		6.5	9	7	9.5	0 00	9	80	4.5	7.5	9	L'	0.0	œ	9	9		8.5	75	6.5	7	9.5	6.5	7	6.5	2	7 0.5			7.5	6		ω	80		7.5	80	2	5.5	9	6	5.5	10.5	2	9	7	9	>
Size		4	3	8	4	3	2	2	2	2	9	0	7	3	4	3		m	0	1 60	4	2	2	3	2	8	2 0			3	3		co	2		3	3	2	3	3	m (2	9)	8	2	~	1
Form		Body	Neck	Body	Rody	Body	Body	Body	Body	Body	Body	Body	pond	Body	Body	Body		Body	Rody	Body	Body	Body	Body	Body	Body	Body	Body	Sherdlet		Body	Body		Body	Body		Body	Body	Body	Body	Body	Body	Body	Body	San a	Body	Body	Rody	1000
Interior		Smoothed Irregular	Eroded	Smoothed Gritty	Smoothed Gritty	Eroded	Eroded	Smoothed Gritty	Smoothed Gritty	Smoothe Scraped	Floated	bad+boom 2	SHOOTHER	Smoothe Scraped	Floated	Eroded		Eroded	Smoothed Gritty	Floated	Smoothed Scraped	Smoothed Gritty	Smoothed	Smoothed Irregular	Smoothed Gritty	pod+com2	Shouried	rioated		Smoothed Irregular	Smoothed Irregular)	Smoothed Irregular	Floated		Floated	Smoothed Gritty	Smoothed	Smoothed Gritty	Smoothed Gritty	Floated	Floated	Floated	riogrem	Floated	Eroded	Froded	T OOD
Exterior	COMPLICATED	STAMPED COMPLICATED	STAMPED	CHECK STAMPED	INDETERMINATE	INDETERMINATE	INDETERMINATE	INDETERMINATE	CORD MARKED	CORD MARKED	SIMPLE STAMPED	CIMDI E CTAMBED	SIMILLE SI AMPLED	SIMPLE STAMPED	PLAIN	SIMPLE STAMPED		STAMPED	INDETERMINATE	PI AIN	CORD MARKED	INDETERMINATE	PLAIN	PLAIN	INDETERMINATE	CUECY STAMBED	DI AINI	PLAIN		CHECK STAMPED	CHECK STAMPED		CHECK STAMPED	FABRIC IMPRESSED		FABRIC IMPRESSED							COMPLICATED	31 Amr LU	SIMPLE STAMPED	SIMPLE STAMPED	CIMDI E STAMPED	Slivil LL STATE LE
Culture Historic Type	Pee Dee 1 Complicated	Stamped Stamplicated	Stamped Stamped	Deptford 2 Check Stamped	Woodland 1 indet	Pee Dee 2 indet	Woodland 1 indet	Woodland 1 indet	Deptford 2 Cord Marked	Deptford 2 Cord Marked	Cape Fear 2 Simple Stamped	Cape Fear 2 Simple	Cape Fear 2 Simple	Stamped Simple	Woodland 1 Plain	Santee 1 Simple Stamped	Pee Dee 1 Complicated	Stamped	Woodland 1 indet	Woodland 1 Plain	Cape Fear 2 Cord Marked	Pee Dee 2 indet	Woodland 1 Plain	Woodland 1 Plain	Woodland 2 indet	Deptford 1 Check	Stamped Spirit	Cape Fear 2 Plain	Deptford 1a Check	Stamped	Deptford 1a Check Stamped	Deptford 1a Check	Stamped	Deptford Fabric	Deptford 1 Fabric	Impressed	Pee Dee 2 indet	Santee 1 Simple Stamped	Santee 1 Simple Stamped	Santee 1 Simple Stamped	Woodland 2 Plain	Santee 2 Simple Stamped	Pee Dee 2 Complicated	Cane Fear 2 Simple	Stamped Stample	Santee 2 Simple Stamped SIMPLE STAMPED	Santas 2 Simula Stampad SIMPI E STAMPEN	שמווובב ל אווואום אנמווואים
Series	2000	PEE DEE 1	PEE DEE 1	DEPTFORD 2	L GIAN IGOOM	PEF DEF 2	WOODLAND 1	WOODLAND 1	DEPTFORD 2	DEPTFORD 2	CAPE FEAR 2	CADE FEAD 2	CAPE FEAR 2	CAPE FEAR 2	WOODLAND 1	SANTEE 1		PEE DEE 1	L CINA IGOOM	WOODLAND 1	CAPE FEAR 2	PEE DEE 2	WOODLAND 1	WOODLAND 1	WOODLAND 2	, ddortan	DEPTFORD I	CAPE FEAR 2		DEPTFORD 1A	DEPTFORD 1A		DEPTFORD 1A	DEPTFORD 1		DEPTFORD 1	PEE DEE 2	SANTEE 1	SANTEE 1	SANTEE 1	WOODLAND 2	SANTEE 2	DEE NEE 2	YEE DEE 6	CAPE FEAR 2	SANTEE 2	CANTEE 2	SAIN LEE 2
Unit Level Oto Series	חוור בפעפו ענץ	-	-	1			-	_	-	1	-			-	1	-		-				-	-	-	-					1	-		_	_		-	-	-	-	-	-	-	-		-	_		
Fact	Last	200	200	200	470	470	470	470	470	470	470	710	0/4	470	420	410		400	00	004	450	450	430	430	430	014	450	430	2	450	450		450	450		450	450	450	450	450	450	440	740	1440	440	440	740	044
Cat # Drow Type North	in ion ad	470	470	480	013	520	520	530	570	220	580		280	580	029	670		680	000	089	580	580	029	029	029	000	089	069		029	670	5	029	680		680	620	620	620	620	620	610	630	020	009	009	000	000
Drov T	10017	surf	surf	surf	4	Surf	surf	stp	stp	stp	sto		stp	stp	surf	Surf	5	surf	,	Surf	Surf	Surf	surf	surf	surf	,	surt	Surf	5	stp	stn	1	stp	stp	-	stp	stp	stp	stp	stp	stp	surf	4	stp	stp	stp	4	stp
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Cito	olle	38SU222	385U222	385U222	CCCIIOC	3850222	385U222	38SU222	38SU222	385U222	38511222		3850222	385U222	38SU222	38911222	22000	38SU222	0000	3850222	3830222	38511222	385U222	385U222	385U222	000	38SU222	38SU222	3770505	385U222	38911222		385U222	38511222		385U222	385U222	385U222	385U222	38SU222	385U222	385U222	00011300	3850222	385U222	385U222	CCCITAGC	3820222

Orientation Rim Decoration										-																								
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										Ctroight	Straight				Straight							Straight												
Lip Shape										Tapered	Lightenien				Rounded						4.5	sup- rounded												
Rim Type										Lotokov	norchied Morchied				Plain							Rolled												
s Motif																	Picia		Cross	Stamped				Cross			Cross	Cross		Cross	Parallel	Parallel		Cross Stamped
Size Thickness Motif			7.5	12	10.5		7.5	L.	6.5	7		6.8.5		9	9.5	6	:	. 6	7	80		8.5	6	6	80	6	9	9	8.5	6.5	. &	00	7.5	7
Size		4	3	3	3	2	3	4	4	ď)	8 2		3	9	4	c	n	m	S		3	2	4	2	4	2	2			2	2	2 2	3
Form	Sherdlet	Sherdlet	Body	Body	Body	Body	Body	Sherdlet	Body	Bim		Body	Sherdlet	Body	Rim	Body	Rode	Body	Body	Body	Silei dier	Rim	Body	Body	Body	Body	Body	Body	Body	Body	Body	Body	Body	Body
Interior			Smoothed Gritty	Eroded	Eroded	Spalled	Eroded	Smoothed Grifts	Smoothed Gritty	Smoothed Gritty	Carried Gried	Eroded		Eroded	Wiped	Smoothed Gritty	Froded	Eroded	Floated	Smoothed Irregular		Floated	Smoothed Gritty	Floated	Smoothed Gritty	Smoothed Gritty	Smoothed Gritty	Smoothed Gritty	Smoothed Gritty	Floated	Smoothed Gritty	Smoothed Gritty	Smoothed Gritty Eroded	Floated
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Exterior			CHECK STAMPED	INDETERMINATE	FABRIC IMPRESSED	INDETERMINATE DECORATED	INDETERMINATE	COMPLICATED	COMPLICATED	PI AIN	COMPLICATED	STAMPED SIMPLE STAMPED		INDETERMINATE	CHECK STAMPED	RANDOM INCISED	FARRIC IMPRESSED	PUNCTATED	SIMPLE STA	SIMPLE STA	I INEAD CHECK	STAMPED	DECORATED	CORD MARKED	CORD MARKED	CHECK STAMPED	CORD MARKED	CORD MARKED	CHECK STAMPED	SIMPLE STAMPED	CORD MARKED	CORD MARKED	DECORATED INDETERMINATE	SIMPLE STAMPED
Culture Historic Type		Deatford 1 Check	Stamped	Woodland 2 indet Deptford 1 Fabric	Impressed	Cape Fear 2 indet dec	Woodland 2 indet	Pee Dee 1 Complicated	Pee Dee 1 Complicated Stamped	Pee Dee 2 Plain	Pee Dee 2 Complicated	Stamped Santee 2 Simple Stamped S		Cape Fear 2 indet dec	Deptford 2 Check Stamped	Thom's Creek 2 Random 2 Incised	Unidentified Fabric Impressed	Pee Dee 1 Punctated	Santee 2 Simple Stamped SIMPLE STAMPED	Santee 2 Simple Stamped SIMPLE STAMPED	Dentford 2 Linear Chack	Stamped Stamped	woodland I Indet decorated	Deptford 1 Cord Marked	Deptford 1 Cord Marked	Deptrord I Check Stamped	Deptford 1 Cord Marked	Deptford 1 Cord Marked	Deptford 1 Check Stamped	Santee 2 Simple Stamped	Deptford 1 Cord Marked	Deptford 1 Cord Marked	decorated Woodland 1 indet	Cape Fear 2 Simple Stamped
Series			DEPTFORD 1	WOODLAND 2	DEPTFORD 1	CAPE FEAR 2	WOODLAND 2	PEF DEF 1	PEE DEE 1	PEE DEE 2		PEE DEE 2 SANTEE 2		CAPE FEAR 2	DEPTFORD 2	Thom's THOM'S CREEK 2 Incised	UNIDENTIFIED	PEE DEE 1	SANTEE 2	SANTEE 2		DEPTFORD 2	WOODLAND 1	DEPTFORD 1	DEPTFORD 1	DEPTFORD 1	DEPTFORD 1	DEPTFORD 1	DEPTFORD 1	SANTEE 2	DEPTFORD 1	DEPTFORD 1	WOODLAND 2 WOODLAND 1	CAPE FEAR 2
vel Qty	-	-	-	-	-	-	- 0	7 -	-	1			-	_	-	-	-	-	-			-	-	-	-	-	-	-	-	-	-	-		-
Unit Level Qty Series																							18 1	1A 3	1A 3	1A 3	1A 3	1A 3	1A 3	1A 3	1A 3	1A 3	1B 3	1A 4
East	450	460	460	460	440	400	480	480	480	460		460	470	200	200	200	200	440	440	440		460												
Cat # Prov Type North	640	009	610	620	640	029	009	630	630	650		650	620	570	570	570	570	620	620	620		630												
# Prov 7	stp	stp	stp	stp	stp	stp	stp	stp stp	stp	stp		stp stp	stp	surf	surf	surf	surf	surf	surf	surf		stp	unit	unit	unit	unit	unit	unit	unit	unit	unit	unit	unit	unit
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Bag	89	90	91		93	94	95	96	96	97		98	66	101	101	101	101	102	102	102		103	104	105	105	106	106	106	107	107	107	107	109	112
Site	38SU222	38SU222	38SU222	38SU222	38SU222	385U222	38SU222	38SU222	385U222	385U222		38SU222 38SU222	38SU222	385U222	38SU222	385U222	385U222	385U222	385U222	38SU222 38SU222		385U222	385U222	385U222	38SU222	38SU222	38SU222	38SU222	385U222	38SU222	385U222	38SU222	38SU222 38SU222	38SU222

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Exterior	FABRIC IMPRESSED	INDETERMINATE		IMPRESSED	INDETERMINATE		SIMPLE STAMPED INDETERMINATE				FABRIC IMPRESSED	INDETERMINATE	INDETERMINATE	INDETERMINATE		SIMPLE STAMPED	PLAIN	INDETERMINATE	STAMPED	-	INDETERMINATE	INDETERMINATE	INDETERMINATE	CTAMBED	SIAMITED	SIMPLE STAMPED	INDETERMINATE	DECORATED	SIMPLE STAMPED		SIMPLE STAMPED	SIMPLE STAMPED				INDETERMINATE		INDETERMINATE		FINE CORD MARKED Floated	INDETERMINATE	SIMPLE STAMPED	REED SEPARATE	PUNCTATE		SIMPLE STAMPED		FINE CORD MARKED Floated	
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	DEPTFORD 1		7	CAPE FEAR 2	WOODLAND 2		SANTEE 2	PEE DEE 2			-1	PEE DEE 2	L GIAN IGOOM	WOODLAIND	PEE DEE 1	SANTEE 2	CAPE FEAR 1		WOODLAND 2		WOODLAND 1	WOODLAND 1	WOODLAND 1	C CINA ICOCIA	WOODLAND 2	CAPE FEAR 1		WOODLAND 2	CAPE FEAR 2		CAPE FEAR 2	CAPE FFAR 1		CAPE FEAR 1	SANTEE 2	WOODLAND 1		WOODLAND 1		CAPE FEAR 1	WOODLAND 2	CAPE FEAR 1		THOM'S CREEK 2		SANTEE 2		CAPE FEAR 1	
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Interior	Floated	Floated		Floated	Floated	Floated	Floated	rioated	Spalled	Spalled	Spalled	Spalled		Spalled	Spalled	Snalled	Floated	Floated	Floated	Floated	Floated		Floated				Smoothed Gritty	Eroded	Froded		Floated		Floated	Smoothed Gritty		Smootned Gritty	Smoothed	- Contraction
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Series	PEE DEE 1	PEE DEE 1	1 220	TE DEE 1	PEE DEE 1	PEE DEE 1	PEF DEF 1	יר מרך	PEE DEE 1	PEE DEE 1	PEE DEE 1	PEE DEE 1		PEE DEE 1	PEE DEE 1	PEE DEF 1	PEE DEE 1	PEE DEE 1	EE DEE 1	PEE DEE 1	PEE DEE 1		DEPTFORD 1			1	CAPE FEAR	PEE DEE 1	PEE DEE 1		PEE DEE 1		CAPE FEAR 1	DEPTFORD 1		CAPE FEAR 2	CAPE FEAR 2	O D D O D O D O D O D O D O D O D O D O
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Site	Bag Ca	Cat # Prov Type North	be North	East	Unit Level Qty Series	el Qty	Series	Culture Historic Type	Exterior	Interior	Form	Size	Thickness Motif	Rim Type	Lip Shape	Orientation Rim Decoration	tion
385U222	187 3	gen surf	pa			-	DEPTFORD 1	Deptford 1 Check Stamped	CHECK STAMPED	Smoothed Gritty	Body	3	7				
	187 1	gen surf				-	DEPTFORD 2	Deptford 2 Linear Check Stamped	LINEAR CHECK STAMPED	Smoothed Gritty	Rim	3	2	Plain	Flattened	Recurved	
						,	COOLITICAL	Deptford 2 Linear Check	LINEAR CHECK	o podtoom?	Spool	0	α				
38SU222	187 2	gen surt	-			-	DEPTFORD 2	Stamped Deptford 2 Linear Check	LINEAR CHECK	Smoothed Gricis	hood		0				
						-	DEPTFORD 2	Stamped	STAMPED	Smoothed Gritty	Body	m (6 1				
	187 4		.		36		WOODLAND 1	Woodland 1 indet	SIMDI E STAMPEN	Eroded	Body		S Parallel				
38SU222 38SU222	189 2	unit			30		PEE DEE 2	Pee Dee 2 indet		Eroded	Body		9				
20011222	1001				30	-	PEE DEE FINE	Pee Dee fp Complicated	COMPLICATED	Floated	Body	co	9				
	061	ALL O			20	-	1001	oraniboo			face		Cross				
38SU222	190 2	unit			3D	-	SANTEE 2	Santee 2 Simple Stamped Deptford 1 Check		Smoothed	Body		8 Stamped				
38SU222	190 3	unit			3D	-	DEPTFORD 1	Stamped		Eroded	Body		8				
					30		SANTEE 1	Santee 1 Simple Stamped		Smoothed Gritty	Body	2 0	6.5				
38SU222	190 5	nuit			3D		WOODLAND	Woodland Indet	INDETERMINATE	Smoothed	pod		3.3				
38SU222	190 6	unit			3D	-	PEE DEE 2	Pee Dee 2 indet stamped	STAMPED	Smoothed	Neck		8.5			Flared	
			290	480		-	BERKELEY	Berkeley, indet	INDETERMINATE	Eroded	Body	2	9.5				
	638 1		290	480		-	BERKELEY	Berkeley, indet	INDETERMINATE	Eroded	Body		10				
38SU222	638 1		290	480				Woodland 1 indet	INDETERMINATE		Sherdiet						
	1 A69		540	470		-	WOODLAND 1	decorated		Floated	Body	2	8				
38SU222	698 1		540	470		-	SANTEE 1	Santee 1 Simple Stamped		Smoothed Gritty	Body	3	6 Parallel				
20011222	1 338		630	440		-	PEF DEF 2	Pee Dee 2 Complicated	STAMPED	Eroded	Body		7.5 Filfot Cross				
	600		630	440			CAPF FFAR 2	Cape Fear 2 indet	INDETERMINATE	Eroded	Body	2					
				2				Woodland 2 indet	INDETERMINATE		,						
	865 3		630	440		-	WOODLAND 2	decorated	DECORATED	Smoothed Gritty	Body	2	7				
	865 4		630	440		-	WOODLAND 2	Woodland 2 Plain		Smoothed Gritty	Body	2 0	7.5				
38SU222	875 1		009	440		-	SANTEE 2	Santee 2 Simple Stamped Woodland 2 indet	INDETERMINATE	Indet	Rody	7					
38511222			009	440		-	WOODLAND 2	decorated	DECORATED	Eroded	Body		6.5				
	875 3		009	440		-	PEE DEE 2	Pee Dee 2 Plain	PLAIN	Smoothed Gritty	Body	3	7.5				
								Woodland 1 indet	INDETERMINATE			(
	875 4	-	009	440		-	WOODLAND 1	decorated	DECORATED	Floated	Body	2 0	9 2				
	875 5	15	009	440			WOODLAND 2	Woodland 2 Plain	PLAIN	Smoothed Gritty	Body		0.5				
	948 1		029	400		- ,	CAPE FEAR 2	Cape Fear 2 Plain	PLAIN	Eroded	Body	7 0	0.1.0				
	945 1		029	400			CAPE FEAR 2	Cape Fear 2 Plain	PLAIN	Eroded	body	0 4	0.0				
			0/9	400			CAPE FEAR 2	Cape Fear 2 Flain	MONTEDAMINIATE	Froded	Body	1 0	7.5				
	945 2		0/9	400			CAPE FEAR 2	Cape Fear 2 Indet	INDELERMINALE	Eroged	Body	7 0	6.7				
Field Site 1	188		TRA ST 14	4			WOODLAND 2	Woodland 2 Plain	PLAIN	Floated	Body	0 0	2 0	Disin	Flattened	Straight	
			S114 -15W	M.			PEE DEE 1	ree Dee 1 Flain	WINTERSTRUCKE	rioaren	1110	2 0	J 0				
Field Site 1	191 2	0.1	ST14 -15	Mo		-	WOODLAND	Woodland Indet Deptford 2 Check	INDE LERMINA LE	Smoothed	pody	7	6.0				
Field Site 2	192 1	surf				-	DEPTFORD 2	Stamped	CHECK STAMPED	Smoothed	Body	4	10.5				
Field Site 2	192	surf				-	DEPTFORD 2	Deptrord 2 Check Stamped	CHECK STAMPED	Smoothed Gritty	Body	2	10				
1								Deptford 2 Check	CHOMPTO VOTIO	4	1000	c	0				
Field Site 2	192	surt				-	DEPTFORD 2	Stamped Deptford 2 Check	CHECK STAMPED	Smoothed Gritty	knog	n	2				
Field Site 2	192					-	DEPTFORD 2	Stamped	CHECK STAMPED	Smoothed Gritty	Body	3	8				
Field Site 2	192 2					-	SANTEE 2	Santee 2 Plain	PLAIN	Smoothed	Body	2	0 0				
ite 2	192	5 surf				-	SANTEE 2	Santee 2 Plain	PLAIN	Smoothed	Rody	4	8.5				

APPENDIX C: STATE SITE FORMS

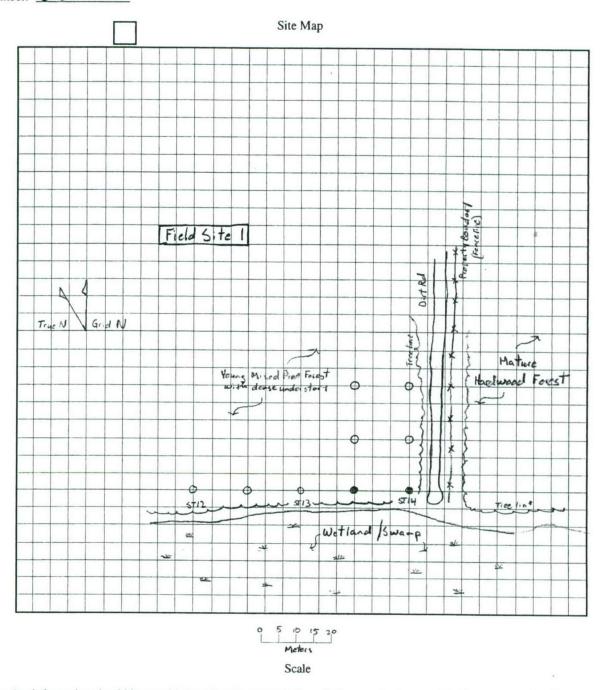
SOUTH CAROLINA INSTITUTE OF ARCHAEOLOGY AND ANTHROPOLOGY UNIVERSITY OF SOUTH CAROLINA SITE INVENTORY RECORD

(68-1 Rev. 85)

STATE: SC COUNTY: Sumter	SITE NUMBER: 3854199
Recorded By: Alvin J. Banguilan Affiliation: New South Associates	Date: 4/21/03
A. GENERAL INFORMATION	
1. Site name: Shaw 2003 Field Site 1 Project: Shaw 4 Sites (2105)	
2. USGS Quadrangle: Sumter West Date: 1957	Scale: 7.5 or 15 minute (circle one)
	ng <u>3760249</u>
Other map reference: Descriptive site type (see handbook):	
5. Descriptive site type (see handbook): Prehistoric Ceramic and lithic scatter	istoric
6. Archaeological investigation (circle): Survey V Testing	Excavation
7. Property owner: Department of Defense - Shaw Air Force Base	Phone number:
8. Address:	
9. Other site designations:	
10. National Register of Historic Places status (circle one):	
Potentially eligible Probably not eligible Only	Additional work
Determined eligible Determined not eligi	ible Date
On NRHP Date	Date
11. Level of significance (circle): National State	Local
12. Justification:	
This small, low density site primarily consists of Middle Woodland ceramic	
Mississippian (Pee Dee phase) component was recognized. Most of the M	
a cultural feature tentatively identified as an occupation midden. These site	
deposits and good research potential such that further work (testing) is war	ranted.
B. ENVIRONMENT AND LOCATION1. General physiographic province (circle):	
Lower Coastal Plain Middle Coastal Plain	Upper Coastal Plain
Piedmont	Blue Ridge Mountains
Landform location: Floodplain Site elevation	on (above MSL): 205 (in feet)
3. On site soil type: Loamy Sand Soil classification.	: no soil classification
	shley-Combahee-Edisto Savannah
5. Nearest river/stream: Long Branch	
6. Current vegetation (circle): Pine/coniferous Hardwood Old field Grass/pasture Agricultural/crops	Mixed pine/hardwood Wetlands/freshwater
Wetlands/saltwater Other Comments:	
7. Description of groundcover (circle): Absent Light	Moderate Heavy 🗸
7. Description of groundcover (effect). Absent	Moderate
C. SITE CHARACTERISTICS	
1. Estimated site dimensions: 30 meters by 20	meters
2. Site depth: <u>45</u> cm.	
Cultural features (type and number):	
Buried A-horizon/Occupation midden	
4. Presence of (circle): midden floral remains faunal remains	shell charcoal
	shell charcoal charcoal good
6. General site description:	poor
Field Site 1 is situated on a heavily vegetated floodplain north of Long Bran-	
scatter of prehistoric lithic and ceramic artifacts situated on the northern bar	
(n=5) consists of one Yadkin Triangular, 1 Woodland plain body sherd, 1 W	
Dee rim sherd, and 1 sherdlet. A cultural feature, possibly an occupation mi	idden was identified.

(Use in conjunction with handbook)

Site Number: **3854299**



The following information should be provided on the site map: site boundaries, nearby topographic features, associated streams, modern cultural features, different land use types in site area, collection loci, test excavation loci, archaeological features and means of access (include north arrow and scale).

M	A	D	v		V	
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Verbal describe is	situated on a floodplain on the northern bank of Long Branch
A dirt road	and fenceline running perpendicular to the branch lies
<u>immediatel</u>	y to the east and forms the eastern boundary of the survey
area.	

Date:

Date:

Date:

Subsequent visits:
Observer

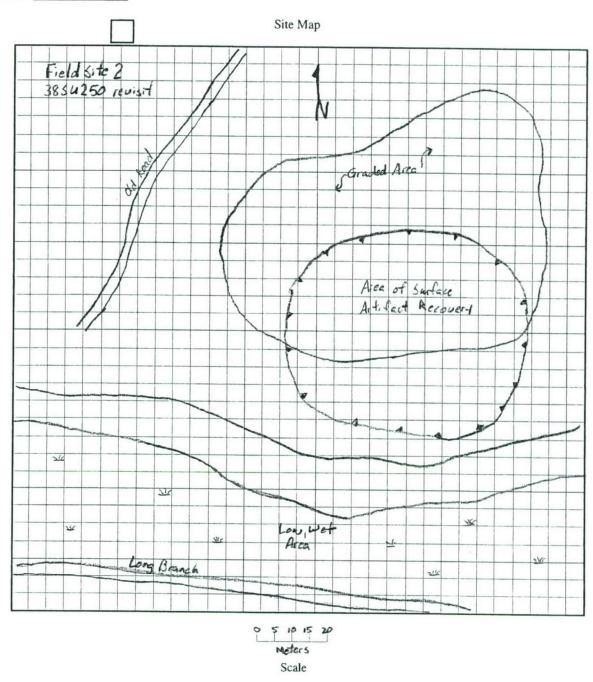
Observer

Observer ____

SOUTH CAROLINA INSTITUTE OF ARCHAEOLOGY AND ANTHROPOLOGY UNIVERSITY OF SOUTH CAROLINA SITE INVENTORY RECORD

(68-1 Rev. 85)

STA	ATE: SC COUNTY: Sumter	SITE NUMBER: 38SU250 revisit
Reco	orded By: Alvin J. Banguilan Affiliation: New South Associates	Date: 4/21/03
	GENERAL INFORMATION	
	Site name: Shaw 2003 Field Site 2 Project: Shaw 4 Sites (2105)	
	USGS Quadrangle: Sumter West Date: 1957	Scale: 7.5 or 15 minute (circle one)
	UTM: Zone 17 Easting 550388 Northing 3	3760854
	Other map reference:	
5.	Prehistoric Ceramic and lithic scatter Historic	ic
6.	Archaeological investigation (circle): Survey V Testing	Excavation
	Property owner: Department of Defense - Shaw Air Force Base	Phone number:
	Address:	
	Other site designations:	
10.	National Register of Historic Places status (circle one): Potentially eligible Probably not eligible Only	Additional work
	Determined eligible Determined not eligible	Date
	On NRHP Date	Date
	Level of significance (circle): National State	Local
	Justification: te 38SU250-revisit consists of a surface scatter of prehistoric ceramics and I	ithing Coveral diagnostic artifacts were
	overed indicating both Archaic and Woodland phase components. This knot	
	a, so the extent of this investigation was limited to a surface grab.	top landiothi was outside the project
	ENVIRONMENT AND LOCATION	
1.	General physiographic province (circle):	
	Lower Coastal Plain Middle Coastal Plain Piedmont B	Upper Coastal Plain lue Ridge Mountains
2.		above MSL): 230 (in feet)
	On site soil type: compact loamy sand Soil classification: no	
		/-Combahee-Edisto Savannah
5.	Nearest river/stream: Long Branch	
6.	Current vegetation (circle): Pine/coniferous Hardwood	
	Old field Grass/pasture Agricultural/crops Wetlands/saltwater Other Comments:	Wetlands/freshwater
7 D	Description of groundcover (circle): Absent Light	Moderate Heavy
1. 2	25gm	meavy
	SITE CHARACTERISTICS	
	Estimated site dimensions: 60 meters by 60	meters
	Site depth: unkown cm.	
	Cultural features (type and number):	
Bur	ried A-horizon/Occupation midden	
4. 5.	Presence of (circle): midden floral remains faunal remains preservement preservement floral remains floral rema	shell charcoal vation (circle): good
	absent	poor
	General site description:	0.1
	SU250 is situated on a cleared ridge top landform overlooking Long Branch. tematic collection of surface material. The artifact collection includes one Sy	
	angular, four Deptford check Stamped, and two Santee Plain.	- Tadkiii



The following information should be provided on the site map: site boundaries, nearby topographic features, associated streams, modern cultural features, different land use types in site area, collection loci, test excavation loci, archaeological features and means of access (include north arrow and scale).

1 4	A	D	V	C		
M	A	r	N.	E.	1	

The sit	escription of locate is situated on a	ridgetop landform overlooking Long Branch. 1
area ar	pears to have be	en graded and is accessible via a dirt road
coming	off Old Frierson	Road.

Site Number		Page 3
D. ARCHAEOLOGICAL COMPONENTS		
Paleo Indian Early Archaic Middle Archaic Late Archaic Early Woodland	Middle Woodland Late Woodland Mississippian Unknown prehistoric 16th Century	17th Century 18th Century 19th Century 20th Century Unknown historic
E. DATA RECOVERED		
List materials recovered: 1- Yadkin Triangular) 1- Sykes/WhiteSprings Stemmed 4- Deptford Check Stamped 2- Santee Plain		imber of artifacts: 8
		-
(Attach additional artifact inventory sheets if nee	ded)	
 Number of person hours spent collecting (to 3). Description of surface collection methods (controlled sampling other (specify):	Extent: complete selective	Test units: Number Size/max. depth
5. Description of excavation units: Number Size/max. de	cm.	cm.
G. MANAGEMENT INFORMATION		
1. Present land use (circle): Agricultural Forest Fallow Residential,		Residential, high density Commercial Industrial Other (specify)

Site Number			Page 4
MANAGEMENT INFORMATION (Cont.)			
	tent	Nature erosion of	
3. Potential impacts and threats to site (circle): Potential threat: none low moderate high	logg cons deve vand inun	ivation	ne
Recommendations for further work (circle): survey testing Comments: Close interval shovel testing and unit	excavation archival excavation	none other:	
5. References (circle): Historic/archival document	ation Yes	No Not Known	
Archaeological documentat	ion Yes	No Not Known	
6. Additional management information/comments:			
 Location of existing collections: New South As Location of photographs: Shaw Air Force Base Location of special samples: Type of special samples: 			
Signature of observer:			
Subsequent visits: Observer			
Observer	Date:	:	
Observer	Date:		